

MANUFACTURERS' RECORD.

A WEEKLY SOUTHERN INDUSTRIAL, RAILROAD AND FINANCIAL NEWSPAPER.

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BALTIMORE, JULY 26, 1895.

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BALTIMORE, JULY 26, 1895.

THE Nashville business men have taken hold of the project to have a State Centennial Exposition with such energy and perseverance, aided by the daily newspapers, that enough money has been subscribed to assure the enterprise. It is another indication of what good can be done by pulling together and systematic work.

THE Portsmouth Star in a recent issue pointed out the decided increase in the real-estate assessments in that city since 1890. The total assessment, including ground and buildings, in 1890 was \$3,482,200; in 1895, \$4,972,701. Since 1894 there has been a marked increase, notwithstanding the general dullness in trade, the gain in the value of land being \$1,250,351, although there was a decrease of \$317,540 in the value of buildings. With the development of the Portsmouth water-front as a deep-water terminus of the Southern Railway Co., a very great development of that city is almost inevitable.

A FEW weeks ago the MANUFACTURERS' RECORD announced the purchase by Mr. Moses H. Cone, of the Cone Export & Commission Co., of New York, and associates, of 1600 acres of land adjoining Greensboro, N. C. It was stated at the time that several cotton mills would be built on this property. This is now confirmed by the organization of two companies, one the Revolution Cotton Mill Co. and the other the Proximity Manufacturing Co., each having a capital stock of \$200,000, all of which, it is stated, has been subscribed. These companies will immediately build cotton mills at Greensboro. Two more companies are projected, but have not yet been organized. The Revolution Mill Company has as directors Rev. F. J. Murdoch, Salisbury, N. C.; C. Cone, J. W. Scott, L. Banks Holt and B. Frank Mebane. The directors of the Proximity Company are Rev. F. J. Murdoch, C. Cone, J. A. Odell, B. N. Duke and G. Frank Mebane. It is understood that the active work of construction will be commenced at once.

Western Interest in Southern Advancement.

Chicago is determined to capture the trade of the South if possible. Not content with the vigorous fight which its business men are making to secure better railroad connections with that section, an organization has been formed to be known as the Chicago and Southern States Association. The primary object is to work up a general interest in Chicago in the Atlanta Exposition and to send a large delegation of leading business men from Chicago to Atlanta, but back of this is a determination on the part of the people of the former city to take an active part in the great advance movement which the South is making. Mr. Malcolm McNeill, of Chicago, in a letter to the MANUFACTURERS' RECORD, states that at the time of the unveiling of the Confederate monument in May it was suggested that a delegation of Chicago business men should visit the South and take in the Atlanta Exposition. The suggestion met with a hearty response, and Gen. John C. Underwood and Mr. McNeill undertook to secure signatures of prominent citizens who would join in this work. Already some 200 or more of the leading merchants, manufacturers and capitalists of the city have signed an agreement to visit the exposition. It is proposed that this Chicago and Southern States Association shall invite similar delegations from all parts of the South to meet the Chicago representatives on some given day in Atlanta. It is also intended to invite military companies from various parts of the South to meet the First Regiment of the Illinois National Guard, which will be in Atlanta on this occasion.

The special object of this society is for the purpose of bringing about a broader acquaintance, socially and in a business way, between the people of the South and those of Chicago. An auxiliary committee of 250 prominent citizens has been formed, and from this number an executive committee of twenty-seven has been organized. This committee includes such prominent men as Mr. Lyman J. Gage, president of the First National Bank; Mr. Chas. B. Farwell, Franklin McVeagh, Melville E. Stone, Mayor Geo. B. Swift, P. D. Armour, Jr., and a number of others of equal standing in the business world. Gen. John C. Underwood is the director and manager, and Mr. Malcolm McNeill the secretary. It is stated in the Chicago papers that the committee of 250 already organized represents an aggregate of invested wealth of several hundred million dollars.

In this movement Chicago gives notice to Baltimore, New York and other leading cities of the country that they must be up and doing if they propose to hold the trade of the South, for

Chicago with its usual push and energy is determined to secure a large share of the rapidly-expanding industrial and financial business of the Southern States.

The MANUFACTURERS' RECORD rejoices at this determination, recognizing that it means great things for Southern upbuilding. Out of it will necessarily come large investments in Southern enterprises, and such general attention to the South as to materially aid in pushing forward the great flow of population which is already tending southward.

Pig-Iron Production.

The production of pig iron in the United States for the first half of 1895 was 4,087,558 tons, a gain of 1,300,000 over the first half of 1894 and of 52,000 tons over the second half of 1894. The semi-annual report of the American Iron and Steel Association gives the following statistics of production in gross tons for these three periods by States:

States.	First half of 1894.	Second half of 1894.	First half of 1895.
Massachusetts	156	2,194	
Connecticut	3,369	4,047	2,438
New York	91,611	83,574	88,369
New Jersey	36,878	26,395	28,113
Pennsylvania	1,350,466	2,019,686	2,087,381
Maryland	3,924	1,626	
Virginia	149,215	151,871	142,580
North Carolina			
Georgia	22,540	17,728	11,535
Alabama	255,950	336,442	399,553
Texas	2,223	2,148	2,562
West Virginia	23,937	56,049	62,867
Kentuc'y	19,639	14,215	19,285
Tennessee	100,223	112,559	114,169
Ohio	332,804	597,225	632,571
Indiana			
Illino's	216,121	388,674	376,401
Michigan	46,309	48,862	45,868
Wiscon'in	35,372	53,223	53,7,0
Minnesota			
Missouri	892	5,630	2,267
Colo ado	25,475	48,2,4	25,016
Oregon	1,000		
Washington			
Total	2,717,983	3,939,405	4,087,558

The production of iron in gross tons according to fuel used was as follows:

Fuel.	First half of 1894.	Second half of 1894.	First half of 1895.
Charcoal	102,697	119,725	103,261
Coke	2,203,239	3,316,985	3,497,078
Anthracite	412,047	502,695	487,479

The stock on hand on the following dates in gross tons was as follows:

Fuel.	Dec. 31, 1893.	June 30, 1894.	Dec. 31, 1894.	June 30, 1895.
Bituminous	285,528	165,187	227,977	129,596
Anthracite	166,359	122,144	119,595	103,007
Charcoal	207,181	229,705	250,183	200,687
Total	662,068	517,036	597,688	439,290

These figures show a large decrease. The decline since December 31, 1894, has been 158,000 tons, the stock of unsold iron on June 30, 1895, being only 439,290 tons, or less than three weeks' consumptive requirements.

THE peach carnival recently held at Macon, Ga., afforded an excellent opportunity to display the varieties of fruit grown in what is termed the

Georgia fruit belt. It was largely attended, and a report from Macon states that the affair was a success in every particular. The Chamber of Commerce and Young Men's Business League of that city are largely responsible for the interest which was aroused in it. No doubt it will be the means of attracting much attention among outsiders to the resources of the State, and will cause increased immigration to this section of the South.

Big Docks and Wharves at Norfolk.

Mr. G. M. Serpel, general manager of the Norfolk & Carolina Railway, wires the MANUFACTURERS' RECORD that his company will receive bids until August 3 for the construction of docks, piers and warehouses at Pinner's Point, Norfolk. Bids are invited for two docks 140x800 feet, two wharves 80x400 feet each and two wharves 60 and 72x400 feet each.

These are the terminal facilities which are being built by the Norfolk & Carolina Railroad in connection with the Southern Railway Company, as this is to be the terminus of the Southern Railway system for heavy shipping.

THE value of the exposition to Atlanta has already been amply demonstrated in the money spent in building in that city recently. Architects state that fully \$2,000,000 will be spent in new work within the limits of the city, mainly as a result of the exposition to be opened in September. Among the principal structures are hotels to cost \$500,000, \$150,000 and \$40,000, respectively; office buildings varying from \$35,000 to \$250,000; residences varying from \$2000 to \$40,000, in addition to the exposition buildings proper. Heavy investments are also being made in Atlanta real estate.

THE Boston Traveler is very anxious that Massachusetts should be properly represented at the Atlanta Exposition. "There is opportunity during this exposition," it says, "to make New England and all her capacities to meet the wants of the Southern community better known than ever before, and thereby lay the foundation of a trade that will endure for many years. If we neglect the opportunity, nearly the whole of this trade will be drawn to the central North. The age has gone by when traders simply bought stocks of goods and waited for buyers to find them. They must send out and hunt up the buyers." The New England people recognize more than ever the importance of the South as a trading centre. The South is becoming more prosperous every year, and it is but natural that the New Englanders should be desirous of cultivating closer business relations with us. We shall have more to sell and more to buy this year than we have had for many years. The East and North are after us. They are on the hunt for buyers, and the best buyers they believe are those who live in the South.—Little Rock (Ark.) Gazette.

With New England and the West running a race to see which can secure the largest interest in Southern business affairs, there will soon be a rivalry as to which section shall invest the most money in the South. The MANUFACTURERS' RECORD welcomes this rivalry, and trusts that it may increase.

[July 26, 1895.]

Preparing an Atlanta Exhibit.

It is gratifying to know that the Tennessee Coal, Iron & Railroad Co. proposes to make at the Atlanta Exposition an exhibit in keeping with the magnitude of its own business operations. Mr. Charles E. Bowron, the commissioner of this company for the Atlanta Exposition, in a letter to the MANUFACTURERS' RECORD, says:

The exhibit of the company will comprise the following:

Sections of all coal seams worked by the company, with coke made from the same, and samples of coal and coal-washing exhibits.

Samples of pig iron from each furnace plant; the actual amount of materials necessary to make a given quantity of iron at each plant; samples of hard, soft and brown ores from the Birmingham district.

An process of the Barton-McCormack concentrating process; a large map of the Birmingham district; chart showing production and distribution of iron, coal and coke by the company last year.

Large photographs of the various plants, of furnaces, mines and ovens of this company; typical ore maps and other drawings of washers, etc., and an illustrated pamphlet descriptive of the company's properties.

This is simply a general outline of the splendid exhibit which this company is preparing to make. It is to be hoped that all other Southern manufacturing enterprises will appreciate the importance of meeting this display with one equally as good. It is extremely desirable that the mineral, timber and manufacturing resources of the South should find an adequate display at Atlanta. The world is going to look to Atlanta to present the very best showing in keeping with the natural resources of the South, and every industrial concern in this entire section ought to give attention to the importance of this subject.

What are the owners of ore and coal properties in other States doing? Will the Bessemer ores of the Carolinas and Texas, the bauxite of Georgia and Alabama, and the wide variety of minerals, so abundant in the South, but of which the world knows comparatively little, be properly represented at Atlanta?

A Great Industrial Company.

In reply to some criticisms of the New York Herald, President Baxter, of the Tennessee Coal, Iron & Railroad Co., has made the following statement as to the operations of this company:

The company owns seventeen blast furnaces of the most modern make, equal to the best in the world, of which even are in blast, turning out about 53,000 tons of iron a month. It is preparing to blow in two additional furnaces, and within sixty days will be producing 65,000 tons per month. The company is the largest producer of pig iron for the general market in the world, and it is making iron at a lower cost than has been duplicated at any previous period. Its coal output varies from 275,000 to 315,000 tons per month.

It is earning fixed charges and the dividend on the preferred stock. It will undoubtedly at an early date resume payment of dividends on the preferred, and with a continuation of the present iron market will earn and pay dividends on the common.

The company owns more coal and more iron than it could work out if it made 1,000,000 tons a year for 250 years. Those competent to express opinions declare that the properties owned by this company are superior to those owned by any other iron concern in the world. The company had May 1, 103,000 tons of pig iron, all of which has been sold. It has in the treasury \$447,000 of DeBardeleben bonds, for which it has refused 92½. The sale of these bonds would leave a surplus of treasury assets of over \$1,000,000. The company is able to liquidate its future indebtedness within thirty days and have a large surplus. The profits on iron production at present are from \$2.50 to \$3 per ton, and profits on the coal business will not be less than \$100 per day.

There has not been a bond of the company issued since 1887, but since that time we have taken up \$912,000 of bonds and expended on the property \$3,055,800, which, added to the bonds cancelled, make \$3,966,000 of increased assets or reduced liabilities provided out of the net earnings of the company exclusively, except as to the amount realized for the preferred stock and applied toward the construction of the Ensley furnaces. In addition to the coal and iron property the company owns eighty miles of railroad, thirty locomotives and 500 cars.

THE BALTIMORE EXPOSITION.

WASHINGTON, D. C., July 22.
Editor Manufacturers' Record:

Answering your letter of recent date asking my opinion of the importance and value of the Centennial Exposition to be held in Baltimore in 1897. I respond with gratification that when in 1886 Washington inaugurated the great exposition movement preparatory to the celebration of the four hundredth anniversary of the discovery of America, Baltimore was the first city to give active, earnest and substantial support. All through that memorable cam-

in honor of the centenary of the acquisition of Louisiana territory, Congress will doubtless appropriate many millions more, will heartily support a similar liberal policy in behalf of the Atlantic seaboard, which Baltimore will have the honor to represent in 1897.

Be assured also that Baltimore and Washington will continue to be known as twin cities, without rivalries or jealousies, but active collaborators in this important movement. A glance at the accompanying diagram showing the transportation lines between the two neighboring cities is suffi-

railways just mentioned will be taxed to their utmost capacity to supply the necessary transportation back and forth.

But transcendently more important than this is the great governmental exhibit which Baltimore is to have. As everyone knows, one of the most attractive features of the World's Fairs held at Philadelphia, New Orleans, Chicago and elsewhere has always been the governmental building and exhibit, containing but a small fractional part of the treasures of the National Museum and departments at Washington.

Baltimore, on the contrary, will have a complete governmental exhibit within forty-five minutes' ride, upon which has been expended more than double the cost of the whole Columbian Exposition at Chicago.

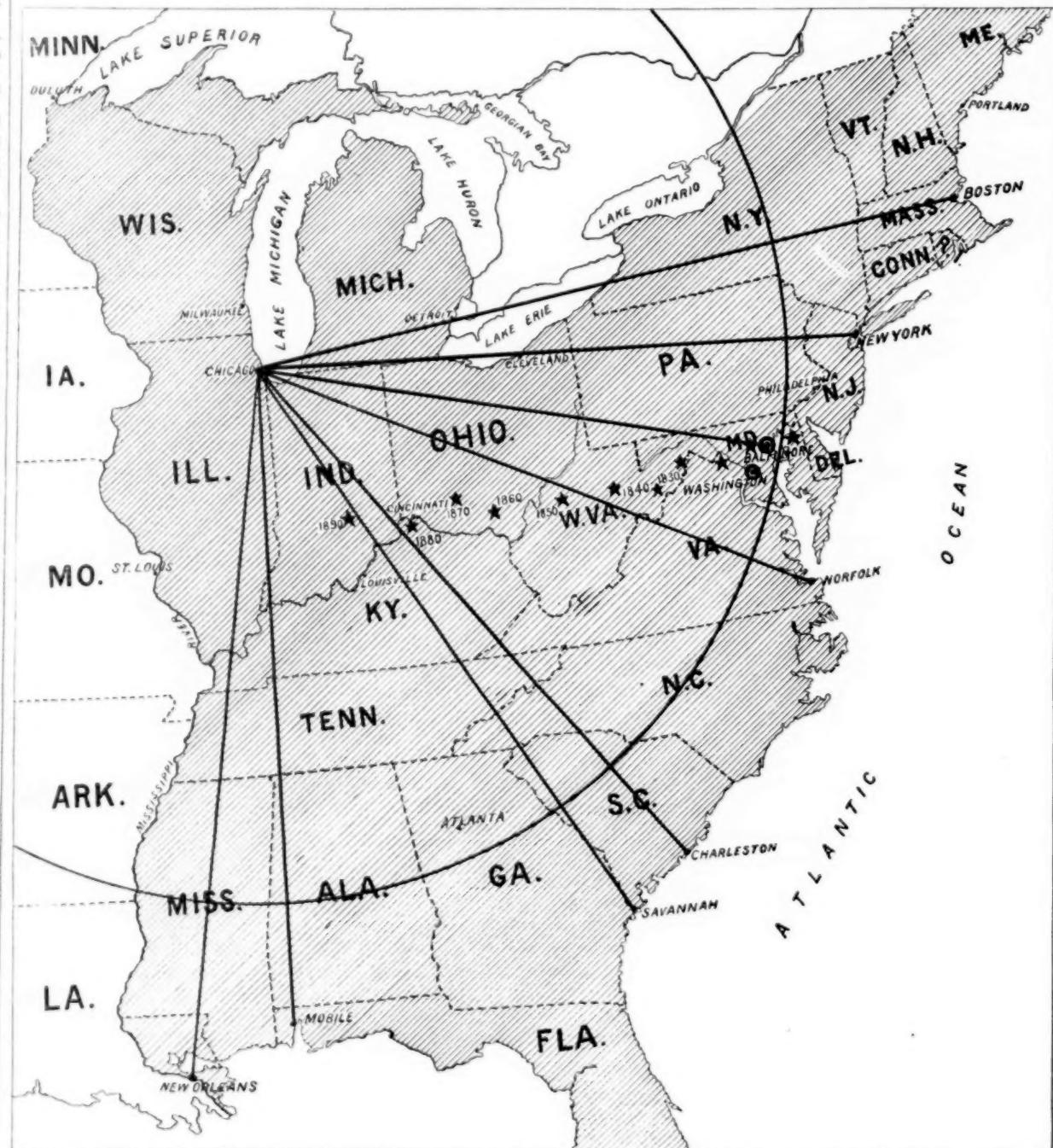


DIAGRAM SHOWING BALTIMORE AS THE SHORT LINE FROM THE GREAT WEST TO THE ATLANTIC SEABOARD; ALSO STARS REPRESENTING CENTRES OF POPULATION; ALSO BALTIMORE AS THE GATEWAY BETWEEN THE NORTHERN AND SOUTHERN STATES OF THE ATLANTIC SEABOARD.

paign, lasting four years, and the friendly rivalry between the great West and the Atlantic seaboard, it fought manfully in the interest of the national capital. I remember also with both pleasure and pride that when the West finally won in a square and honest fight, Baltimore and Washington did not sulk in their tents, but joined heartily in helping make the exposition a success worthy of the nation under whose auspices it was held and the New World which Columbus discovered.

Now that Baltimore has inaugurated a great exposition movement, be assured that the great Northwest, for whose exposition Congress appropriated many million dollars, and the great Southwest, for whose proposed exposition at St. Louis in 1903,

client to demonstrate the practical value of the proposed co-operation. There are now, as you are aware, two first-class double-track steam railways between the two cities, and in addition a double-track electric railway, commonly known as the Boulevard Line, is now under construction and will be completed before the opening of the exposition. The distance from city to city is but forty-one miles, and the time ranges from forty-five minutes to one hour. In other words, the time is but a trifle more than that on the trains from the hotel centre of Chicago to its exposition park. The hotels of Washington can therefore easily be drawn upon for any additional accommodations which may be needed in this respect, and I predict that the three

In brief, the national capital, with its grand public buildings, its museums, libraries, art galleries, observatories, zoological garden, fish commission, botanical garden, Smithsonian Institution, etc., is practically a colossal and permanent World's Exposition, which will be a great drawing-card for Baltimore. I therefore respectfully suggest that Baltimore keep all of the three or more million dollars which Congress may appropriate for her exposition for other uses than an expenditure on a small and incomplete governmental exhibit there. With this plan of co-operation between the two cities every man, woman and child in Washington will lend his and her influence in helping secure from Congress the liberal appropriations for Baltimore that she is

clearly entitled to, in view of what has been so liberally done for expositions at Chicago, New Orleans and other cities throughout the United States.

VALUE OF EXPOSITIONS.

Great expositions are the pathfinders of commerce, and as Senator Hawley (whose experience as president of the exposition at Philadelphia in 1876 gives extra weight to his opinion) well said in debate upon the floor of the United States Senate, "never was one held that in many respects has not absolutely revolutionized the industries of the country which held it."

The annual outflow of gold to Europe for various purposes is assuming enormous proportions. Over fifteen years ago, according to an official estimate submitted to the Department of State by one of our consuls in

If it is constitutional to appropriate money for attractions in Europe which take gold out of the United States, in order to develop and enlarge our foreign commerce, it is surely doubly constitutional to appropriate for Baltimore and other American cities, which will not only attract gold here, but at the same time stimulate foreign trade and show the foreign visitors the extent of our natural resources.

AN EXPOSITION WITH AN IDEA AND A SPECIAL MISSION.

A glance at the first diagram will show that the exposition at Baltimore is located where it will stimulate some great and important industrial and commercial movements. In brief, it is an exposition with an idea and a special mission. As a

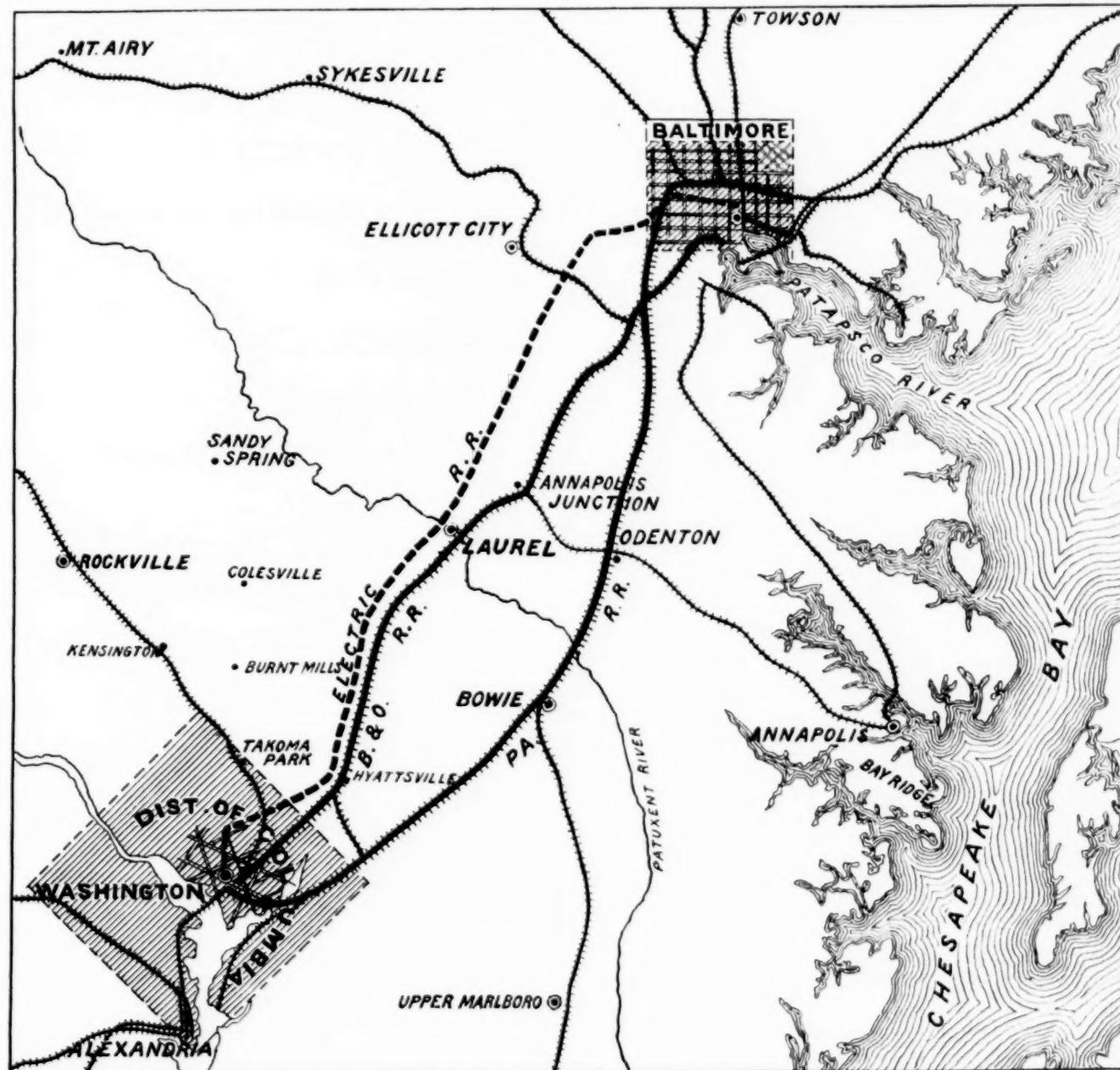
The stars on the diagram, which indicate the centres of population of the United States each census year, also demonstrate that those centres have always been nearly on the latitude of Baltimore, and, therefore, nearest that seaport. In this connection it should be borne in mind that 83 per cent. of the domestic exports of the United States during the fiscal year ended June 30, 1893, went eastward to Europe. A century ago nearly 100 per cent. of the annual domestic exports went to Europe, and have ever since ranged between the two figures. It is safe to predict that for many generations to come the percentage will not fall much below 83.

As Baltimore is centrally and most admirably located to receive her share of these eastward shipments, she will for all

Baltimore, which has always been prominent in trade relations with the West Indies, Brazil and the east coast of South America, can through the agency of the exposition enlarge its field of operations so as to include all the eighteen American republics south of the United States. Those republics, equally desirous of enlarging their commercial relations with the United States, will do as they already have done at the New Orleans and Chicago Expositions, and as they are now doing at Atlanta—accept the invitation to participate, and make full and complete exhibits of their marvellous natural resources and products.

CONCLUSION.

For these and many other reasons which limited time does not permit me to enumerate in this hurried letter, I desire to say that



TRANSPORTATION LINES BETWEEN THE TWIN CITIES, BALTIMORE AND WASHINGTON, FOR THE WORLD'S FAIR OF 1897.

Europe, the annual average spent by Americans in Europe for purposes of travel, pleasure, art and education was about \$105,000,000 in gold. During the year 1889, owing to the additional attractions of the Paris Exposition and for other reasons, the amount doubtless reached \$200,000,000. It is safe to assert that the present annual average is at least \$150,000,000.

Congress has for many years past stimulated this exodus by large appropriations for expositions in Paris, London, Brussels, Vienna, Barcelona, Antwerp, Berlin and other places. It will do so again for the great Paris Exposition of 1900. Now why not counterbalance this tendency by providing for the Baltimore Exposition (with an annex in Washington in the shape of a complete governmental exposition) such attractions as will draw back from Europe some of the gold annually taken there by our tourists.

gateway between the Northern and Southern States of the Atlantic seaboard it will be in close touch with the new manufacturing, mining and other material development of the new South, a movement which is already attracting unusual attention from capitalists, both American and European. It will also be in close touch with the revival of industries, which for several years past have been paralyzed by an unprecedented business depression. As a

gateways between the great producing and shipping centres of the West and the markets of Europe, Baltimore has a remarkable advantage. As shown by the diagram, the comparative air-line distances from Chicago to the seaboard are as follows:

To Baltimore.....	625 miles.
To Norfolk.....	700 "
To New York.....	710 "
To Charleston.....	725 "
To Savannah.....	780 "
To New Orleans.....	850 "
To Boston.....	850 "

time be a natural gateway between the great interior and the markets of Europe. Add to these great natural advantages the further fact that Baltimore has for the purposes of the exposition a tributary population of 12,000,000 within a radius of 200 miles and a few hours' travel by rail, and the financial success of the exposition cannot for one moment be doubted.

LATIN-AMERICAN COMMERCE.

Glance now at a map of the Western Hemisphere, and it will be observed that Baltimore is admirably located for trade with the West Indies and republics of Central and South America.

A line drawn South from Baltimore touches Cuba, and with a very slight deflection crosses the Isthmus of Panama, and then runs southward along the whole western coast of South America.

I consider the proposed exposition admirably located, most timely in that it will stimulate the much-needed revival of industries, and most promising in its usefulness in that it will make a specialty of Southern States and Southern republics.

ALEX. D. ANDERSON.

A COMMERCIAL CLUB has been organized by the business men of Hearne, Texas, with H. K. Davis, president; R. A. Allen, first vice-president; E. M. Weyl, second vice-president; T. N. Graham, secretary; R. C. Allen, treasurer.

MANAGERS of mills, factories, furnaces, mines, etc., and parties starting manufacturing enterprises and needing machinery or supplies of any kind will find it profitable to consult the advertising columns of the MANUFACTURERS' RECORD. Its pages contain names of the best houses in the country among manufacturers of and dealers in machinery and mill supplies.

IRON-MAKING IN VIRGINIA.

Cost of Producing Pig Iron at Several Points.

[Special Corres. MANUFACTURERS' RECORD.]

BRISTOL, TENN. AND VA., July 12.

My first visit to Bristol was in 1883, when it was a quiet little country town that did not dream of "booms," mineral resources, industries or anything else that was in any way connected with activity or progress. Since then it has had the "boom" fever, has built new stores, banks, industries and railroads, and now that the fever has passed it still possesses the buildings and railroads as well as the memory of plans which did not materialize. While I have passed through the town many times between my first visit and the present one and have been familiar on paper with the numerous resources claimed, I have always heavily discounted the statements made, and I frankly admit have thought the future of the place would be little better than its present condition. The blast furnace I regarded as a monument of erring judgment, and its railroad, the South Atlantic & Ohio, as a "boom" scheme that would never result in good.

I now freely grant that my opinion was based largely on prejudice against all "boom" schemes and was not founded on facts. While I do not by any means grant that the place has the advantages or will grow as predicted in the glowing literature published about it, I have good ground for saying that, as one of the termini of the Norfolk & Western, Southern, South Atlantic & Ohio and the little Bristol & Elizabethton Railroads, the accessibility on one side of the rich and valuable coal and timber lands around Big Stone Gap, and on the other of the equally rich timber and mineral lands of Northwestern North Carolina, it will without question grow to be a place of considerable importance—I should add, if proper enterprise is shown by its people and those interested in the railroads and undeveloped lands.

So far as the railroads are concerned, from what I hear they are willing to do anything reasonable to forward the interests of the place, and the people themselves are ready to take a hand in anything, though I doubt if they would be able as a rule to invest more than their active services. As to the owners of large properties, the receiverships and attendant litigation which unfortunately have resulted from "boom" development are gradually being settled, and within a short time some of the larger companies will be in shape to again resume operations, and this time on a hard pan basis, with no inflation of values or wildcat speculation.

The operations at Big Stone Gap have already commenced. As stated by your correspondent there, the furnaces, ore lands and leases of the Appalachian Steel & Iron Co. have been sold under foreclosure to R. C. Ballard Thurston, of Louisville, who is trustee for the Big Stone Gap Improvement Co. This action was taken to free the property, and within a short time it is expected that a reorganization of both of these companies will be brought about, which will include a large tract of coal land. A railroad switch will be run into this, and the company will both ship coal and manufacture coke for its furnaces.

It will be remembered that when the two furnaces were brought to Big Stone Gap from Carondolet, near St. Louis, the iron work for both was erected, but only one, named the "Jennie," was completed and blown in. The fuel used has been both Pocahontas and Middlesborough coke. It is stated that for some reason the latter did not work as satisfactorily as the former, and of late Pocahontas has been used altogether. The difficulties with the miners have compelled the furnace to shut down several times, but on July 11 it started

with a fair stock and expected to be able to continue steadily.

The ore used here is a fossil hematite from one of the veins which traverses the length of Powell's valley, and which have been developed at and around Cumberland Gap. The particular vein operated by the Big Stone Gap furnace is about eighteen inches thick, and resembles the Dirtseller ore found along the Chattanooga Southern Railroad, the ore at the latter point being a continuation of the same ore formation in Powell's valley. Limestone is secured nearby, and labor is both abundant and cheap.

As to the cost of the iron, I would make the following estimate from what could be learned and seen at the place:

1½ tons Pocahontas coke, at \$2.20.....	\$2.70
2½ tons ore at \$1.10.....	2.48
½ ton limestone, at 70 cents.....	.35

Material.....	\$5.53
Labor and all other charges.....	2.50

Total.....	\$8.03
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I think this will be found very close to the actual cost. When the company is able to mine its own coal and supply coke to the furnace, I believe the item of coke per ton of iron can be reduced to \$1.90 or \$2, thus saving seventy to eighty cents on the present cost.

As a rule, pig iron made from fossil hematites is light-colored and inclined to be weak. That made at Big Stone Gap is quite the reverse, the grain being open, dark and exceedingly tough. Indeed, I consider it fully equal to any iron made in the country, not excepting Low Moor or other furnaces in that district. Its toughness in the pig is something remarkable, resembling that which I have seen in some special high-class irons made from high-grade Lake Superior ore and Connellsville coke. Unfortunately I have no analysis of the iron, but am told that it has exceptional scrap-carrying properties and produces an excellent machine casting, both of which I can readily believe.

This company, however, is not the only one from which good promise may be expected. The Virginia Coal & Iron Co., which, it should be noted, is entirely independent of the Virginia, Tennessee & Carolina Steel & Iron Co., which was the parent of the various Big Stone Gap corporations, has at last commenced active operations in developing the large territory of coal lands which it owns. Mr. A. R. Wing, receiver of the Carnegie Iron Co., at Johnson City, has secured a contract to build six miles of railroad from the Louisville & Nashville extension in Powell's valley up to the company's mines. This company will, it is understood, build a number of coke ovens, and it is possible that some of them will be the improved by-product ovens. This company is owned

by people who are quite familiar with the various phases of the coal business, and what is more, have abundant capital to carry out any plans which may be undertaken. It is quite certain that it would not undertake extensive development and spend large sums of money unless an abundant return was sure to be realized, and of this it is evidently satisfied. Shipments can be made over the Louisville & Nashville to Northwest points, the Norfolk & Western to the East and the South Atlantic & Ohio to Bristol, and thence by the Southern Railroad to points on its line. On one side it will have to compete with Pocahontas, and on the other with Middlesborough, Coal Creek, Jellico and the mines on the Cincinnati Southern. These matters have undoubtedly been looked into, and the company is going ahead.

These developments and the others which will result will be of great benefit to the South Atlantic & Ohio Railroad, and make it a valuable property. Part of the country through which it passes is excellent for agricultural purposes, and contains fine timber. A very interesting feature of the road and one which well repays a visit is

the natural tunnel through which it passes. This has been cut through the cherty limestone by a stream, now almost dry, and is entered on one side through a little amphitheatre, the walls of which tower several hundred feet above the tunnel. The immense cliff, with the relatively small tunnel mouth at its base, makes the scene decidedly impressive.

One word more about Bristol. I do not at this moment remember at what figure the Bristol furnace was to make iron, as announced in its prospectus, but my recollection is that it was about \$7.50. The plant was operated a short time, and, as it was found a losing operation, was blown out. Since then it has been in litigation, but there is reasonable hope that this may now be settled. If it is, I believe that when coal development at Big Stone Gap is completed it will be possible to operate at a profit, but I should also add its main ore territory is still to be developed. Coke it could secure for say \$1.60 per ton; fossil hematite from Big Stone Gap, about \$1.40; washed brown hematite from Cripple Creek, about \$1.80, and from Embreeville for about the same figure. Possibly some fair quality hematites can be found along the Bristol & Elizabethton Railroad, and certainly along the branch of the now reorganized Charleston, Cincinnati & Chicago running south from Johnson City. Magnetites could be had from Cranberry if it pleased the potentates of the little narrow-gage from Johnson City to the Cranberry mines to grant possible freight rates and the operators of the mines to sell for a reasonable figure. Limestone can be secured readily and cheaply, and labor is abundant. With due allowances, I believe iron could be made as follows:

Coke, 1½ tons, at \$1.60	\$2.00
Ore, 2½ tons, average at \$1.60	3.60
Limestone, ½ ton, at 70 cents35

Material.....	\$5.95
Labor and other items	2.50

Total	\$8.45
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This figure can, I think, be reduced both in cost of coke, ore, and especially the item of labor and incidentals. Under proper management the plant might produce for about \$8 per ton, and even this could be shaded. I don't want to boom this plant, but it would seem to me that it would pay the owners better to operate it even at a small profit than to allow it to stand idle.

H. S. FLEMING.

A Hundred-Fold Return.

Mr. W. P. Blasingame, dealer in farm and fruit lands, Fort Valley, Ga., has had an advertisement in the *Southern States* for the last six months. In paying for it and ordering its renewal in double the space, he writes:

It affords me pleasure to pay this, for the outlay has yielded more than a hundred-fold in returns. Your magazine surely covers the whole land. As a direct result of my advertisement in it, I have had inquiries from nearly every State in the Union, and a great many especially from the Northwest. It has been the means of bringing several investors and settlers here, for we only need to get people to come and see this country to induce them to invest or settle. The single line in my advertisement stating that I could furnish "gilt-edge" 8 per cent. real estate mortgages has interested several investors, and already, as a result, one man from Massachusetts has come and arranged with me to organize a loan and trust company.

Your magazine has been worth much to me and to this section, and, I believe, a blessing to the whole South. I believe that the *Southern States* is the best friend the South has ever had.

Every town and every property in the South desiring to attract the attention of Northern and Western buyers should advertise in the *Southern States* magazine. It is published by the Manufacturers' Record Publishing Co.

It is claimed that Mr. W. P. Thompson, president of the Lead Trust, has purchased several thousand acres of iron-ore land near Harper's Ferry, Va., and that he will shortly begin mining iron ore for shipment.

Large Contract Awarded.

The contract for the courthouse at Baltimore has been awarded to Messrs. John Gill & Sons, of Cleveland, Ohio. The estimates were for a building to cost \$2,000,000, but Messrs. Gill & Sons placed their figures at \$1,849,000. The successful firm is one of the best known in the West, Mr. John Gill having been in the contract business in Cleveland for over forty years. The firm is now building several very large structures, among them the Central county armory at Cleveland, which is 265 by 165 feet in size, with one of the largest single-span roofs in the world. Other buildings finished or being built by them are the American Telephone Co.'s building, the plant of the General Electric Railway Co.'s power-house, the Cleveland water works, all in the city named, besides the Northern Ohio Insane Asylum, one of the most extensive of its kind in the world, and the Ohio Soldiers' and Sailors' Orphans' Home at Sandusky. The courthouse award had attracted attention all over the country on account of the large amount invested. It will be built of what is known as Woodstock granite and Beaver Dam marble, or material equally as good, to be approved by the courthouse commission.

Solidifying Molasses.

The low price for molasses has caused a very large accumulation in Louisiana, and producers are considering the best way to store it at least expense. Mr. W. R. Stringfellow, of New Orleans, claims to have found an inexpensive process by which it can be solidified. He says that a machine which will solidify or concrete fifty barrels of molasses daily can be furnished the planter at a cost not exceeding \$1500, and the cost of operation is not more than two or three cents a barrel. The exhaust steam from the sugar-house engine is injected into the bulk molasses with nothing more than the normal pressure as it escapes from the exhaust and at a temperature of about 140 degrees Fahrenheit. By this process about twenty-five gallons of water are expelled from a barrel of molasses, and then the concreted product is ready for storing or shipment as soon as cooled. In this form it resembles coarse sugar.

THE Young Men's Business League of Brunswick, Ga., has elected the following officers: President, T. E. Welles; vice-presidents, J. S. Leonard, John Eagan, Dr. C. F. Marsh; secretary, R. E. L. Daniell; treasurer, J. E. D'Alemberte.

THE manufacturers of Louisville, Ky., have decided to organize a branch of the National Manufacturers' Association, and have formed a temporary organization by electing Mr. Theo. Ahrens as chairman and Mr. Henry Dood as secretary.

THE stockholders of the Tennessee Centennial Co. have elected officers as follows: President, John W. Thomas; vice-presidents, W. A. Henderson, W. L. Hickman and Jno. Overton, Jr.; treasurer, W. P. Tenner; auditor, James J. Prior. Subscriptions to \$125,000 of the stock have been secured.

THE Hot Springs Barytes Co., at Hot Springs, N. C., is working steadily, its output averaging 5000 tons white baryta per annum. The rock is secured within a short distance of the works, and preparations are on foot to open another mine, and possibly increase the capacity of the mill. The air process is used to separate the fines. The fine baryta flour is used in the manufacture of white paint, either as an admixture with white lead or zinc white, or by itself. It is said that a white paint composed of one-third each of baryta, white lead and zinc white makes an exceedingly durable paint which is not liable to blister or become discolored.

RAILROAD NEWS.

[A complete record of all new railroad building in the South will be found in the Construction Department, on page 414.]

ATTRACTIVE RAILROAD PROJECT.

Ex-Governor Fishback's Description of a Rich Country.

FORT SMITH, ARK., July 16.

Editor Manufacturers' Record:

In your last note you request to be informed of the status and prospects of the recently chartered St. Louis, Siloam Springs & Southern Railroad, from Fort Smith to St. Louis. The MANUFACTURERS' RECORD has been and is making such a magnificent canvass in the interests of the South that it gives me pleasure to arm you with any data in my possession.

The chief promoter and president of this road is Col. H. D. Mackay, of St. Louis. I do not know what his prospects for building it are, but I do know that there is not another line completed or projected in the United States which would prove a more profitable railway investment, and for all time.

This may seem extravagant language, but my reasons are as follows:

First—if there were no arable land along its line (and there are few better regions for both agriculture and horticulture), and no mineral or marble or coal, the timber alone in Arkansas (I cannot speak advisedly about Missouri) would justify its cost of construction.

Second—if there were no other product along its line, the coalfield of which Fort Smith is the centre would justify its cost.

Third—if there were no arable land, no coal and no timber along its route, the zinc and marble would justify its cost.

Fourth—if there were none of these, this being upwards of 100 miles shorter in distance between Fort Smith and St. Louis than any other railroad, the eight railroads now completed or being built into Fort Smith would pour through this funnel a traffic which would of itself justify the cost.

Fifth—the country traversed by it in Arkansas is about 175 miles wide, without a railroad running in that direction, and is so rough that the first road built will never be paralleled.

Let me go a little more into details:

First—one of the largest hardwood firms in the Western States is cutting timber along or near this route and hauling it forty-five miles to a railroad, and I am informed that they say they have never seen or heard of so fine a body of hardwood; besides, there is a forest of pine along the entire route, beginning about twenty miles from this city.

Second—Fort Smith is the centre of a coalfield extending seventy-five miles east, 100 miles west and forty-five miles south. The quartermaster-general of the United States Army has been for several years testing the heating capacity of the coals of both this country and foreign countries, and he reports the coals of this county (Sebastian) to be superior, and from 25 to 100 per cent. superior, to any in the world so far tested in this respect. Its coke is pronounced equal, if not superior, to the Connellsville coke.

Third—This road would traverse 216 square miles of zinc. Professor Branner says much of this is within 1 per cent. of theoretically pure zinc ore. As you are aware, it took the premium over the world at the World's Fair.

The Morning Star mine, in Marion county, recently sold for \$300,000 to an English syndicate, although it is seventy-five miles from a railroad.

This mine has an exposure on the side of the mountain of zinc ore, which by measurement weighs about 13,000,000 pounds. A seven-ton chunk from this mine was on exhibit at the recent World's Fair. It

should be called a quarry and not a mine.

The Tar-Kiln mine or quarry in this same county is equal, if not superior, to the Morning Star, and I have just been informed by reliable men who have examined it that the ore crops out opposite on both sides of the mountain. The Markle mine, as also several others, are supposed to be nearly if not equally rich. In short, there is enough zinc ore in Marion county alone to furnish several trainloads every day for 500 years, and it can be mined so much more cheaply than any other yet discovered that it is believed it will have no rival when once we get transportation.

In and around this zincfield are 2199 square miles of marble, equal to the Tennessee marble; also onyx, lead and copper. A small smelter has recently been erected in this county for smelting lead, but it is 100 miles from a railroad, and must rely upon the uncertain river.

In the very heart of this field is fine water-power sufficient to generate enough electricity to do all the mining of North Arkansas.

Fourth—Until within a recent period it was the custom to drive Arkansas, Texas and Indian Territory cattle to Kansas, Nebraska and Iowa to be fattened on corn. Now this is all reversed. Thousands of cattle are now being brought to Arkansas and Texas every winter from Nebraska, the Dakotas and Iowa to be fattened on cottonseed meal and hulls. This industry alone of all this Southwestern country would furnish such a short air line as this road an enormous and a rapidly-increasing traffic.

That such a railroad has not long since been built is incomprehensible, except upon the hypothesis of an entire want of information, or rather a gross misinformation, concerning Arkansas.

W. M. FISHBACK.

The Southern Combination.

Some time ago the MANUFACTURERS' RECORD referred to a possible combination between the Southern Railway system and Southern Pacific, which would give a trunk line across the southern part of the United States from San Francisco to Washington and Hampton Roads—to Washington as an inland terminus and Hampton Roads as a seaboard terminus—the idea being to connect the Southern and Southern Pacific systems at New Orleans. A recent issue of the New Orleans Picayune, referring to the possibility of this, says:

"When Mr. R. L. Fellman, a wealthy Scotch attorney, was in this city two years ago he stated that European railroad stock and bondholders in this country were tired of seeing their investments run into the hands of receivers and made to pay such poor dividends. He said that there had been a meeting of the leading European stockholders in London; that as a result of this meeting it was decided to consolidate the various railroad interests of this country as much as possible with a view of securing better returns from them, and that these stockholders had selected him as a committee of one to spend several months in this country looking into the various systems of road here, many of which the European stockholders had never seen. It has been since Mr. Fellman's visit that the great Southern system was organized. Wise railroad people, bearing in mind the statements of Mr. Fellman, saw at once the master-hand of the European stockholders, and that the plans detailed by Mr. Fellman were being put into inauguration. Close observers of railroad developments note that gradually, little at a time, the various short systems in the East and Southeast are being swallowed up in the Southern system. One road after another has gone into the Southern, and there are many yet to fall into the consolidation.

The agreement of the European stock-

holders includes every system of importance east of the Mississippi river, in the Southwest and possibly some of those leading directly North.

"Messrs. J. P. Morgan & Co., of New York, are the parties to whom has been intrusted this great consolidation work. With Messrs. Morgan & Co. is closely affiliated Colis P. Huntington, the great Western railroad magnate. His ability as a railroad manipulator and his general knowledge of the business eminently fitted him for becoming the right-hand man of the Morgan people. Mr. Huntington is now in Europe. It is a significant fact that he arrived in Europe about the same time as the Morgan representatives, and it is stated that he and the Morgan people have been the instruments in disposing of the additional block of stock, from the revenues of which it is proposed to purchase other railroad systems in this country and add them to the Southern.

"The work of consolidation will be confined principally to the railroads east of the river, for here it is that European stockholders have met with most financial disasters in their investments. West, however, the march of consolidation will take its way later. The great Southern Pacific Company will become part of the system, and will doubtless add to its mileage other Western lines which have proven bad investments and are bought at reasonable prices."

The acquisition by the Southern of the Queen & Crescent system indicates that it has decided to enter New Orleans, and such an arrangement as that above detailed would be of the greatest value in giving it a through route to the Pacific coast; also in giving the Southern Pacific what would be practically a line of its own to the Atlantic seaboard and to the Potomac river.

The New Orleans & Western.

A dispatch from New Orleans states that this company has begun work on the construction of its road and improvement of its terminal property. The plans of the company to build cotton compresses, a grain elevator, wharves, etc., in connection with a railroad from Battleground plantation to Avondale were explained in a letter from Chief Engineer A. W. Swanitz to the MANUFACTURERS' RECORD several weeks ago.

In an interview with a New Orleans reporter Mr. Swanitz is quoted as saying:

"Contracts have just been let for the erection of two of the largest cotton compresses in the world. These presses are to have a minimum density of thirty-five pounds to the cubic foot. One of these presses, under the contract, is to be in running order by the 5th of November, and the other is contracted to be available for service by the 1st of December. The contractors will at once begin active work, bringing their material on the grounds and getting ready for business.

"A switch road has been run across to the Southern tracks, which run about half a mile from the Battleground plantation, and thus we will be enabled to get ready transportation of building material. Contracts have also been let for the erection of 500,000-bushel capacity elevators, which was awarded to James Stewart & Co., of St. Louis. Under the terms of the contract it must be completed by November 1. This elevator will be constructed upon the latest improved methods and will be complete in every respect.

"We have also let contracts for the erection of the cotton sheds, which will cover twenty-two acres of ground. They will be built substantially, and provided with all the fire protections possible to have.

"A feature in connection with our road is that the engines which will be used about the sheds and yards will be patent pneumatic. We have given the order for two of these to the H. K. Porter Co., of

Pittsburg. These engines are so constructed that there can be no danger of fire being conveyed by them to the cotton-yards and through the premises.

"A force of men will be engaged at once building the necessary wharves along the river front. This work will be prosecuted as rapidly as possible, as it is desired to have the foundations of them begun when the elevator work and the compresses shall be fairly started."

The company intends erecting several hundred cottages also for use of employees.

Important Railroad-Bond Deal.

The truth of the prediction made a year or so ago when the Maryland Trust Co. was organized, that it would become a powerful factor in developing closer financial relations between Baltimore and the South, is being constantly demonstrated. Some months ago this company formed a \$2,000,000 syndicate to extend at a lower rate of interest the old bonds of the Charlotte, Columbia & Augusta Railroad, which proved to be a very successful operation for all parties in interest. Another deal of the same character has just been put through in the organization of a \$3,700,000 syndicate to purchase the bonds of the reorganized Georgia Southern & Florida road. The entire amount was over-subscribed within a very short time after the first opportunity was given.

The Georgia Southern & Florida Railroad, operating a line 285 miles long from Macon, Ga., to Palatka, Fla., is a very valuable piece of railroad property. Its receivership was brought about by entanglements of the Macon Construction Co., which had built this road. A bondholders' committee was formed and a plan of reorganization agreed upon. Under foreclosure sale the property was bought in for the bondholders, and the reorganization was based upon having fixed charges considerably less than the present earning capacity of the property without regard to any increase in its business. The Southern Railway Co., appreciating the value of this line not only for its freight traffic business, but as a through route from the West to Florida, purchased a majority of the certificates, each certificate entitling the holder to \$1000 5 per cent. first-mortgage bonds of the new company and \$200 first-preferred stock, \$200 second-preferred stock and \$200 common stock. Having secured control of the stock by the purchase of the certificates, and not desiring to carry these bonds in its treasury, the Southern Company entered into negotiations with the Maryland Trust Co. for the organization of this syndicate. The syndicate takes from the Southern Railway Co. its entire purchase of \$1,800,000 of bonds, and is prepared to buy all other bonds that may be offered at satisfactory prices. The result has already been a very marked advance in the value of these bonds.

The earnings for the twelve months ending June 30, 1895 (June estimated), were:

Gross.....	\$843,192
Operating expenses.....	622,857

\$20,335

The interest charges on the \$3,700,000 of bonds to be issued under the new mortgage of \$4,000,000 (\$300,000 being retained in the treasury of the company) is \$185,000, so that it appears that, operated as a separate concern, in the hands of a receiver, it has earned quite a handsome surplus. Now that it is a part of the Southern Railway system, the earnings, both gross and net, must increase.

Illinois Central's Good Showing.

The fact that the Illinois Central Railroad Co. has declared its customary semi-annual dividend of 2½ per cent. indicates the flourishing condition of this system. Several months ago the Illinois Central, in connection with other railroad lines in this country, was criticised by certain English

financial papers, and a prediction was made that the company would probably pass its dividend or else greatly reduce it. The recent action of its board of directors shows how baseless were these criticisms.

The Southern's Terminals.

The Southern Railway Co. and the Norfolk city council have reached an agreement by which this company acquires terminal property in that city, and binds itself to establish a terminus "independently and in its own right upon the water-front of Norfolk or vicinity, and provide for steamship piers, wharves and other facilities necessary for coastwise and foreign shipping, and also establish at Norfolk upon the property acquired a railway and steamship terminus for local traffic to and from the city." It is to open its wharves and piers about January 1, 1896.

Several weeks ago the MANUFACTURERS' RECORD published the plans of the Southern in detail for terminal facilities at Portsmouth, across the river from Norfolk. In connection with the Atlantic Coast Line, it now controls about 11,000 feet on the Portsmouth side of the river and a frontage of about 500 feet on the Norfolk side, making a total of water-front of 11,500 feet. Preparations are already begun for improvements by grading for yards at Pinner's Point and making surveys for wharves, etc. It is reported that plans have already been prepared to erect two very large warehouses here.

Southern Railway Association.

The resignation of Mr. E. B. Stahlman as commissioner of the Southern Railway and Steamship Association is not unexpected by those who are familiar with the railroad situation in the South. While Mr. Stahlman stated nothing about leaving the association until the meeting at Asheville, it has been understood for some time that several of the railroad companies have felt that some other head for the association would result in more harmony, and it is understood that for this reason these companies have declined to join the organization. Their attitude was manifested several months ago, and the announcement at the Asheville meeting is really the result of strong opposition to Mr. Stahlman's methods. There is a probability that with a new commissioner at the head of the association nearly, if not all, the independent lines in the South will join it, with the result of a general improvement in railroad matters and much more harmony than has hitherto existed.

The Project Revived.

The MANUFACTURERS' RECORD is informed that Northern parties have become interested in the project to build the Norfolk, Wilmington & Charleston Railroad along the Atlantic coast. This enterprise was started several years ago, but of late has not been heard of. Mr. Jas. E. Hughes, of Philadelphia, in a letter to the MANUFACTURERS' RECORD, states that the outlook for beginning construction in the near future is very good. The road is designed to skirt the Atlantic coast from Charleston to Hampton Roads, forming the last link in a railroad system which would extend from Jersey City to the southeast section of Florida.

Southern's Extensive Shops.

The MANUFACTURERS' RECORD has in previous issues referred to the Southern Railway Co.'s extensive shops in the South. Those at Knoxville, which are among the most complete in this country for the building and repairing of locomotives and cars, are now in operation. In addition to these, however, the Southern is about to make important improvements and additions to its plant at Atlanta, which will include a new machine shop at a cost of about \$50,000, while the other departments

will be increased so that nearly 1000 men will be employed in them. The building of and improvement of these plants indicates that the Southern Company anticipates doing an extensive business, and is making ample preparations for it.

The Boone Railroad Project.

The scheme being engineered by Albert E. Boone and others to build a railroad from Knoxville to some point on the Atlantic ocean, also what Mr. Boone calls a Terminal & Belt Railroad around the city of Knoxville, has reached a point where he has obtained \$100,000 in Knoxville & Ohio Railroad securities in exchange for securities in the proposed belt line. The Knoxville & Ohio issue was obtained from the city by a vote of the people. A statement has been published that Hatch & Foote, bankers, of New York, are interested in the enterprise, but they write the MANUFACTURERS' RECORD denying any connection whatever with it.

The Southern Offices.

Regarding the report that the Southern Railway Co. may change its offices from Washington to Atlanta, Mr. W. H. Baldwin, third vice-president, in a letter to the MANUFACTURERS' RECORD states that there is no such intention on the part of the company.

Heavy Railroad Traffic.

As an indication of the increase in railroad traffic in Alabama, the Alabama Car Association reports show that in June it hauled 20,851 cars—638 more than in June, 1892, nearly 10,000 more than in June, 1893, and over 12,000 more than June, 1894.

Proposed Steamship Line.

In a letter to the MANUFACTURERS' RECORD Messrs. Ross, Howe & Merrow, steamship agents at New Orleans, Mobile, Pensacola and Galveston, Texas, detail a plan for establishing a line of transatlantic steamers between Galveston and the principal cities of Europe. The idea in brief is to build or purchase ten modern vessels, each to be owned by a separate corporation with a capital of \$150,000. The price of shares is placed at \$10 each, in order that all classes of people can subscribe. This would make a total capital of \$1,500,000 for the combined companies, most of which would be owned in the Southwest. This firm is now negotiating with business bodies in several Texas cities with a view of having each organize a company to own such a vessel, the ship to be named after the city controlling the principal amount of stock in it.

This plan, which has been adopted largely in Europe, is well received by the Texas business men and others, and there is a probability that the new line of vessels will be put into operation in the near future.

Railroad Notes.

MR. A. C. KNAPP has resigned his position as commissioner of the Savannah Freight Bureau, to take effect July 31.

MR. D. H. SNYDER has been elected president of the Trinity, Cameron & Western Railroad, succeeding Enzy Taylor, who died a few weeks ago.

THE Danville (Va.) Electric Car Co. has elected the following officers: President, P. R. Jones; vice-president, L. C. Berkley, Jr.; secretary and treasurer, H. S. Lanier; superintendent, N. W. Berkley.

THE Knoxville-Tennessee Electric Railway has been sold for \$162,151 to parties supposed to represent the bondholders of the company, among them C. E. Lucky, W. G. McAdoo and C. C. Howard.

A DISPATCH from St. Louis, Mo., states that an English syndicate is now negotiating with a view of securing all the street railroads in that city. It is understood

that an effort will be made to increase the combined capital of the companies to \$25,000,000, a majority of the stock to be taken by English people.

THE Cotton Belt system has put on a line of Pullman sleepers between St. Louis and Shreveport by the way of the St. Louis, Iron Mountain & Southern Railroad to Delta, and the St. Louis Southwestern to Shreveport. This will be a great accommodation to the traveling public, who will doubtless take advantage of it.

THE Chester & Lenoir Railway Co. has elected Mr. G. W. F. Harper as president and treasurer, with J. L. Aggers, A. G. Brice, J. F. Wallace, C. E. Spencer, J. B. White, V. E. McBee, J. A. Martin and P. G. Moore as directors. Under the management of President Harper the road is steadily increasing in earnings. Last year its receipts were over \$86,000.

THE annual statement of the Nashville, Chattanooga & St. Louis Railway Co. for the year ending June 30 shows gross earnings of \$4,608,501.88 and net earnings of \$1,882,141.94, and after deducting fixed charges, etc., a surplus of \$362,846.21 is left. The statement for the month of June also shows a large surplus, which indicates how business is increasing in the section traversed by this line.

THE property of the Harriman Coal, Iron & Railway Co. has been sold to Edward A. Quintard, president of the Citizens' Savings Bank of New York. It is stated that Mr. Quintard will own the road individually, and does not represent any company. The railway extends in and around Harriman, Tenn., with several mining branches. It has been operated by A. A. Hopkins and W. H. Russell, as receivers for the company.

THE Clyde Steamship Co. will put a new vessel on the route to be established between New York and Jacksonville, Fla., touching at Charleston, S. C. The ship will be 338 feet over all, and will make from seventeen to eighteen knots per hour. She will be one of the finest vessels now in the American coastwise trade, and will be called the Comanche. The Cramp Shipbuilding & Engine Co., which is now constructing the vessel, expects to complete its work by October 1.

Gold-Mining Operations in Georgia.

NEW BRIDGE, GA., July 19.
Editor Manufacturers' Record:

The Black mine has been sold to J. H. Helmer, Decatur, Ga.; Lee Roy Moore, Greenville, Mich., and Joseph Storey and George Berger, of Hastings, Neb. The mine comprises both placer and vein matter. They are operating the placer and contemplate erecting a 10-stamp mill.

They will operate under the name of the Helmer Gold Mining Co. Mr. Charles Roberts, Sautee, White county, Ga., contemplates putting in a new mill. Mr. John Martin, of Gainesville, Ga., has new mill in course of erection and is repairing an old one in White county. J. H. Helmer, Decatur, Ga.; F. C. Mills, Cleveland, Ohio, and F. G. Benham, New Bridge, Ga., have just let contract for 1½-yard dipper dredge boat; will dredge for gold in Chestatee river; may put in one or two more.

F. G. BENHAM.

THE lessee of the Buena Vista Furnace, at Buena Vista, Va., is the Rich Patch Iron Co., owning about 9000 acres of ore property at Low Moor, Va. The company has leased the Buena Vista Furnace, situated both on the Norfolk & Western and Chesapeake & Ohio Railroads, thereby securing a market for the pig iron to points reached by both these roads. The officers are: D. Shanahan, president; C. M. Shanahan, vice-president and general manager; Chas. J. Doherty, treasurer. The iron will be sold by Frank Samuel in Philadelphia and adjacent territory.

FINANCIAL NEWS.

A Successful Corporation.

The American Banking & Trust Co.'s success shows what an enterprising corporation can do in a Southern city. This company, which was organized in Baltimore but a comparatively short time ago, has been obliged to increase its facilities for business by making its capital \$500,000 and moving into larger offices. It now occupies one of the largest apartments in the Equitable Building, in Baltimore, and has excellent facilities for doing a bond and surety business. It is stated that over \$5,000,000 in business has been written within the last six months. The officers and directors of the company are among the best known business men and financiers in Baltimore. James Bond is president, and Jno. T. Stone, secretary and treasurer.

New Corporations.

A bank with \$10,000 capital has been opened at Sturgeon, Mo., with E. S. Stewart, cashier.

The Citizens' Building and Loan Association has been chartered at Gaffney, S. C., with \$50,000 capital.

The F. D. Hill Loan Co. has been formed at Fort Worth, Texas, with \$15,000 capital, by F. D. Hill and others.

The Merchants' Building and Loan Association has been chartered at Charleston, S. C., with J. S. Wescoat, W. G. Harvey and others as directors.

The Polytechnic Building and Loan Association has been organized at Fort Worth, Texas, with \$50,000 capital by W. J. Boaz, J. R. Baker and others.

New Securities.

The city of Baltimore will receive bids until July 29 for \$710,000 of 3½ per cent. securities. Hon. F. C. Latrobe, mayor, will give information.

Interest and Dividends.

The Savannah Gas Light Co. has declared a semi-annual dividend of 3 per cent.

The Cowpens (S. C.) Manufacturing Co. has declared a semi-annual dividend of the same amount as in 1894.

Recent dividends declared in Augusta, Ga., include a semi-annual dividend of 3 per cent. by the Augusta Real Estate and Building Association.

The Salisbury (N. C.) Cotton Mills' condition is indicated by the payment of a quarterly dividend of 2 per cent., declared at the last meeting of the company.

Financial Notes.

THE Bankers' Magazine has been consolidated with Rhodes's Journal of Banking, and the July issue is the first of the new magazine. It combines the characteristic features of both its component publications, including a summary of current banking litigation and a useful monthly record of "Money, Trade and Investments."

As an indication of the increase in diversified farming in Tennessee, steamboat men on the rivers state that where formerly the vessels carried loads of corn and meat to the plantations they are now carrying other supplies and taking away to the city markets loads of vegetables, grain and meat which the farmers have to sell.

THE West Florida exhibit at the Atlanta Exposition promises to be one of the most interesting of the entire display. Not only fruits and vegetables, but preserves of many kinds, and with preparations which will show the fruits grown during the various seasons in Florida, will be arranged. It is expected that several thousand jars and bottles will be placed in the exhibit, which will afford an object-lesson of the resources of this portion of the State from a horticultural standpoint.

TEXTILES.

[A complete record of new textile enterprises in the South will be found in the Construction Department, on pages 413 and 414.]

Two Cotton Mills for Greensboro.

Two companies, each with capital stock of \$200,000, have been organized to build cotton mills at Greensboro, N. C., and two more are being worked up.

Textile Notes.

WORK is being pushed upon the Richland Cotton Mills, Columbia, S. C., and the plant is near completion.

THE new mill of the Stonewall Cotton Mill Co., at Stonewall, Miss., will have 10,000 spindles, besides several hundred looms.

THE work on the brick portion of the Walhalla Cotton Mills, at Walhalla, S. C., has begun, and the foundation is completed.

A REPORT from Farill, Ala., has it that Mr. J. R. Ramsey has begun the construction of a cotton mill in connection with a grist mill and saw mill.

WORK has begun on the new mill of the Cannon Manufacturing Co., at Concord, N. C., which is to contain about 12,000 spindles and 400 looms.

THE success of textile manufacturing in the South has caused the Congaree Mills Co. to resume operations at Columbia, S. C., after suspension of about two years.

THE Warren Manufacturing Co., of Warren, Md., has ordered a number of cards and drawing-frames of the Pettee Machine Works, Newton Upper Falls, Mass.

THE cotton factory at East Durham, N. C., has reached a point where the brick-layers have begun work. Lack of material has caused some delay in building this structure.

THE Dilling Cotton Mills Co., in a letter to the MANUFACTURERS' RECORD, confirms the report that it will double the capacity of its present plant at King's Mountain, N. C., by adding 5000 spindles.

A DISPATCH from Greenwood, S. C., is to the effect that Northern parties have leased a large brick building in that town with a view of placing in it an equipment of machinery for a knitting mill.

THE MANUFACTURERS' RECORD is informed that the company now building the large cotton mill at Lockhart Shoals, S. C., contemplates increasing the plant by the construction of two other large mills.

THE Union Cotton Mills Co., at La Fayette, Ga., has decided to considerably increase its capacity by putting in 3072 spindles and eighty-four looms. This will give a total of 7488 spindles and 288 looms.

MR. L. LANIER, president of the Lanett and West Point Cotton Mills, has recently placed additional orders for cards and drawing-frames with the Pettee Machine Works, Newton Upper Falls, Mass., for these mills.

THE Highland Park Manufacturing Co., of Charlotte, N. C., has about decided to increase its capital for the purpose of building a spinning mill. A special meeting of stockholders is about to be called to consider the matter.

SAMUEL T. MILLER, land agent of the Baltimore & Ohio Railroad Co., has recently been in Hagerstown, Md., with a view of locating a woolen mill to employ fifty hands in that city if enough inducement is offered by the property-owners.

THE stockholders of the cotton-mill company, Columbia, S. C., which intends building on the co-operative plan, have organized under the name of the Carolina Cotton Mills Co., with over 500 shares of stock of \$100 each subscribed. The officers elected are: E. W. Richardson, president; Henry P. Clarke, vice-president; F.

H. Winston, solicitor; J. L. Withers, secretary and treasurer. It is intended to make the capital \$100,000.

A DISPATCH from Tuscaloosa, Ala., states that construction work has begun upon the cotton factory which is to be built in that city for the purpose of making yarns exclusively. The machinery is to be of the latest pattern, and the mill will be thoroughly equipped. It will be owned and operated by Tuscaloosa people.

A Florida Deep-Water Harbor.

[Special Corres. MANUFACTURERS' RECORD.]

PUNTA GORDA, FLA., July 22.

In your issue of June 14 you mentioned the construction of the standard gage railroad from Arcadia to Hull and thence to Liverpool, a distance of sixteen miles. Liverpool is situated on Peace river. To this point the Peace River Phosphate Mining Co. has dredged the river so as to obtain six feet of water, with the purpose of barging its output to Boca Grande, at the mouth of Charlotte Harbor, a distance of thirty-two miles. On Peace river lie the great phosphate beds of De Soto county. This railroad runs down the river, being about one-quarter to one-half mile distant from the river. Prior to January of 1895 there were several companies operating on the river. The three largest companies, operating four large plants—one at Scott's, two at Arcadia and one at Hull—consolidated. The principal owners and managers of the consolidated companies, now known as the Peace River Phosphate Mining Co., are H. M. Comer, receiver of Georgia Central Railroad; Joseph Hull and H. M. Comer, Jr., of Savannah, Ga.; — Patterson, of New York city; George W. Scott, of Atlanta. This company owns about 100 miles of Peace river and inexhaustible beds of phosphate. During the year 1894 it shipped 130,000 tons of phosphate, 104,000 tons of which were shipped via the Florida Southern Railroad through Punta Gorda and barged thence to Boca Grande. At Boca Grande, coast chart 175, United States coast and geodetic survey department, Washington, D. C., shows a depth of water on the bar of twenty-one feet at low tide, and forty-two feet in the harbor within 100 feet of the shore. The largest ship which has ever been taken out of Boca Grande carried 4400 tons of phosphate and drew twenty-two feet of water. This point lies on the gulf, and is 100 miles south of Tampa, being the nearest deep-water terminal point on the mainland to Havana and the West Indies.

Today will mark a change in the phosphate shipments of this company. To Liverpool the company now transports its own phosphate over its own railroad, and will make its first shipment today over this new line. The company is now prepared to mine 200,000 tons annually. Barging the rock to Boca Grande and then paying thirty-five cents to have it delivered from the barges into the ships costs fully ninety cents per ton. The cost of delivering a fair output of 150,000 tons would be \$135,000 annually. When it is considered that the present wharf at Boca Grande is sixty feet long, and that the depth of water at its end is twenty-six feet, it is easy to believe that this railroad will be extended to this point. The line would run through a level, fertile country, the landowners of which would donate land sufficient in value to pay for grading the railroad. The annual cost of delivering the rock on board the ships would nearly build the railroad. The port of Boca Grande with its great depth of water and its proximity to Cuba would be a fine terminal point for the Southern Railroad, which has lately entered Florida. Ten or twelve railroads have been chartered to Boca Grande. Should the Southern Railroad go to Boca Grande it would have the finest harbor and the most southerly deep-water terminus on the gulf.

ALBERT W. GILCHRIST.

COTTONSEED OIL.

This department is open for the full and free discussion of trade topics and practical questions, and contributions are invited from men who are identified with this industry. Items of news are always acceptable.

The Market for Cottonseed Products.

NEW YORK, July 23.

A sharp advance in oil values has occurred, and the long-delayed though oft-predicted trade revival is at hand. The change has been primarily brought about by recent revelations with regard to available stocks in first hands, the latter being of a much less quantitative character than was generally supposed. That heavy consignments of oil have been regularly dispatched from Southern shipping points to European centres, although at comparatively low prices, permits of no question. The weekly aggregate of exports, as set forth in previous letters in this column, throughout the depressed period attest the accuracy of the foregoing. During the early part of the week under review offers of parcels of prime summer yellow were rejected at 25 $\frac{3}{4}$ cents, purchasers expecting a concession with regard to this abnormally low quotation, while at the moment 27 cents is the firm market quotation for the same product. Good off grade yellow rules relatively higher than did prime summer yellow a few days ago. Speculators holding stocks purchased at the recent low market ebb have reason for congratulation. Stocks at this market are, however, comparatively light, while receipts may be similarly described.

The propitious conditions which now beset the trade become the more appreciable by having been deferred, although not unexpected, present developments being in full accord with prognostications recently advanced in this column. The opinion is prevalent that the great crushing companies have been steadily purchasing supplies through their agents in various oil-producing centres of the South prior to the upward market movement. No appreciable improvement is yet apparent in the domestic demand, although developments of a favorable character are among the reasonable probabilities within the immediate future. With the exception of consignments to Marseilles aggregating 2000 barrels, exports to Southern Europe are practically at a standstill. Latest Leghorn advices report olive oil easier in consequence of the improved prospects for next crop. Heavy Texas barrelled shipments of crude are reported, together with important purchases for this market in bulk. The following are current quotations: Prime crude in barrels, 24 cents; at the mills f. o. b., 19 to 21 cents; crude off grade, 22 to 23 cents; prime yellow summer, 26 $\frac{3}{4}$ to 27 cents; butter oil, 28 to 29 cents; off-grade yellow, 26 to 26 $\frac{1}{2}$ cents; white oil, 30 to 31 cents, and soap stock, 1 $\frac{1}{4}$ to 1 $\frac{1}{8}$ cents per pound.

Cake and Meal.—Export trading has practically closed until the advent of the new season by reason of diminished supplies. The arrivals of American cotton-cake and meal in Liverpool, England, during the first half of the present year aggregate 18,000 tons of cake and 13,000 tons of meal, or 31,000 tons in all, against 23,700 tons and 23,500 tons over the same period of 1894 and 1893, respectively. A marked increase in consumption is thus apparent, while existing stocks are less than half the quantity usually held at this period of the year, a circumstance which presents a decidedly hopeful outlook for the new season's trading. The private advices which conveyed the foregoing data to your correspondent also announce that complaints are rife in England owing to the distribution of American cake consignments of a decidedly indigestible character, primarily owing to their being as hard as "paving stones." Ordinary American cake is quoted £4 17 $\frac{1}{2}$.

while for the fine, bright yellow variety £5 10s. is quoted. New Orleans quotations for prime cake are \$19.50 to \$20 per ton.

Cottonseed-Oil Notes.

THE Luling Oil Mill, of Luling, Texas, which was burned some time ago, will be rebuilt, money enough for the purpose having been secured.

THE stockholders of the Houston County Oil Mill & Manufacturing Co., of Crockett, Texas, held a meeting at that place on the 17th inst. It is stated that its charter had been forfeited and it was taking steps to procure a new one.

Improving Aransas Pass.

A dispatch from Galveston, Texas, states that Charles Clarke & Co., who have the contract for improving Aransas Pass, have sent their outfit to that point, and that work will probably begin by August 1.

The contract calls for the construction of a composition jetty of sandstone and riprap about 7000 feet in length. The project contemplates a single jetty which, it is claimed, will perform the functions of a double-jetty system. The principle on which it is expected to accomplish this is very simple. By constructing a single jetty on the eastern side of the Pass it is claimed that the currents setting along the coast will be deflected, and thereby prevented from making deposits of sand on the bar, while the current from the bay, produced by the tides, unhampered by the coast currents, it is claimed, will soon scour away the bar.

At the present time there is nine and three-quarters feet of water on the bar at the shoalest point at mean low tide. From fifteen feet on the inside of the bar to fifteen feet on the outside is 1500 feet. The channel is straight and wide, and spreads gradually over the entrance to the bay. The proposed jetty will start at a point about 1300 feet from the southwest end of St. Joseph's Island, and extend in a compound curve. It will extend seaward 2200 feet in an east-southeast direction, having a radius of 6000 feet, and compound curve for a distance of 1550 feet, having a radius of 4000 feet. This will leave the outer end of the jetty in fifteen feet of water. From the 15 foot outside contour to the outside 24-foot contour is only a few hundred feet. The foundation of the jetty will be composed of a mattress one foot thick made of compressed brush fascines, on which will be laid sandstone. The base of the jetty will be sixty feet wide, with superstructure of one and a half horizontal to one vertical foot, reduced to ten feet top measure, and will extend three feet above mean low tide. The top and sides will be capped with the best grade of selected sandstone, which will be secured from quarries in Duval county, Texas.

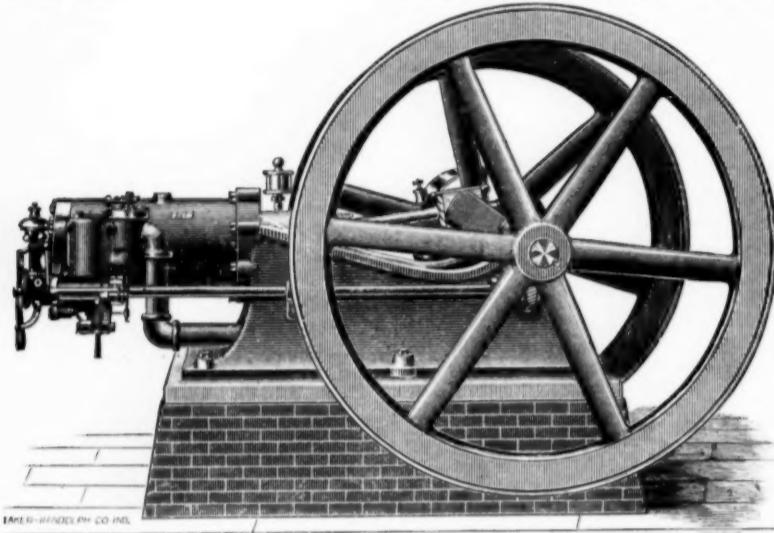
S. C. HAMILTON, JR., manager Greenville Lumber Co., Greenville, N. C., in a letter to the MANUFACTURERS' RECORD, says: "We like the MANUFACTURERS' RECORD and hope you will continue in the same line. You are building up the South on good, safe business principles, and every statement you make is to the point. The writer is from the North, way up in Maine, and for Southern people and industries we have only words of praise."

THE Anniston Gold Mining Co. has been organized with Mr. William Noble, president, and Mr. E. E. G. Roberts, secretary and treasurer, both of Anniston, Ala. This company is reported to have purchased property near Heflin, Ala., which promises a very large yield of gold. A dispatch from Chattanooga states that \$50,000 has been raised in Chattanooga for the purchase of property at Heflin, and there is said to be considerable excitement in regard to the gold discoveries at that point.

MECHANICAL.

Lambert Gas and Gasoline Engine.

For a score of years there has been a growing demand for a simple motor of some description—more economical, safer and cleaner, and one that would occupy less floor space than the steam engine and boiler, with its coal and ash heaps, water service, etc.



THE LAMBERT GAS AND GASOLINE ENGINE.

The gas and gasoline engines of today are designed to satisfy the people in this direction. There was a time when it was said, and there may yet be a few not familiar with the satisfactory operation of the best makes of this type of motor who may say: "Oh, yes! They are all right for light power, but not desirable where heavy power is required." It is, however, being demonstrated that gas or gasoline engines are cheap and safe for both light and heavy power for all purposes now in use. Gas or gasoline power has special advantages for driving grain elevators, flour mills, electric-lighting plants, cotton gins, water-works plants, printing presses, feed mills, spice mills, well-driving machinery, oil-well machinery and factories generally, and especially for isolated locations, such as rolling-mill shears, saw, bending and straightening machines, elevators, fans, etc. Their safety, economy, cleanliness and the fact that no special building is required, and that lower rates of insurance are obtainable than when steam engines are used, and that they do not require an engineer, are all points emphasized by their makers. The foregoing is in a general way applicable to all gas or gasoline engines which have met with a reasonable degree of success, and especially is it considered true of the Lambert engine, which combines a degree of excellence in construction, efficiency and economy, coupled with extreme simplicity, said to be unsurpassed by any other engine on the market. The Lambert is not what is known as a vapor engine, but uses the gasoline raw, just as received direct from the tank; thus overcoming all chances for explosions. The cut herewith shows this engine. In its construction all valves are direct-acting poppets, requiring no cleaning or oiling. They lift squarely from the seat. The crankshafts are made of steel and finished to gage. The cylindrical bed and main bearings are constructed of one symmetrical casting, to which the entire valve-gear is attached to insure perfection and durability. The charge of gas or gasoline is ignited by a small electric battery, which is furnished with each engine.

There is a notable absence of complicated mechanism in the governor, yet it is automatic, controlling the admission and discharge, whether few or many, as required by light or heavy load.

If for any reason the speed of the engine is reduced to a motion slower than is required by the work it is doing, the governor automatically cuts off the flow of gas or gasoline, preventing any serious results likely to follow if the flow was uninterrupted under like similar conditions. This feature is distinctive with the Lambert. The speed of the engine can be changed and regulated while in motion same as with throttling governor on steam

A groove, which is an arc of a true circle, is milled in the shank of the drill or tool. As shown in Fig. 1, a key let into the body of the socket fits into the groove, and is locked securely in place by a turn of the revolving internally eccentrically counter-bored collar.

After the key is locked it is impossible for the tool to slip in the socket or to be

The journals are of large diameter and extra length, and run in self-oiling boxes lined with genuine Babbitt metal. The sand disks, two in number, are made in sizes varying from twenty-four to forty-eight inches in diameter, to suit the class of work for which they are intended, and there is an improved clamping device for holding and taking up the slack of the

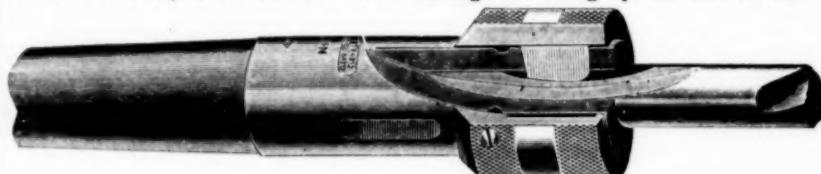


FIG. 1.

pulled out until the collar is turned back again to release the key. The end of the collar is beveled, and a plain index mark on it and on the body of the socket shows when the key is released.

Drills or tools that have had the tangs on the shanks twisted off can be used in these grip sockets successfully, and in this way the cost of the sockets can be saved many

paper so that it will at all times run true. The tables, made of glued-up strips of maple and walnut, are placed in the middle of and at right angles to the disks, thus enabling stock to be squared up at the same time it is being finished. If desired, the disks may be boxed in, so that the dust may be removed from the paper by means of an exhaust fan, as in double and triple-

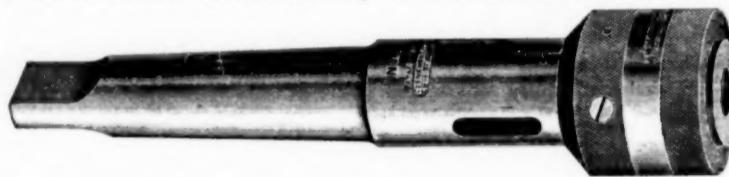
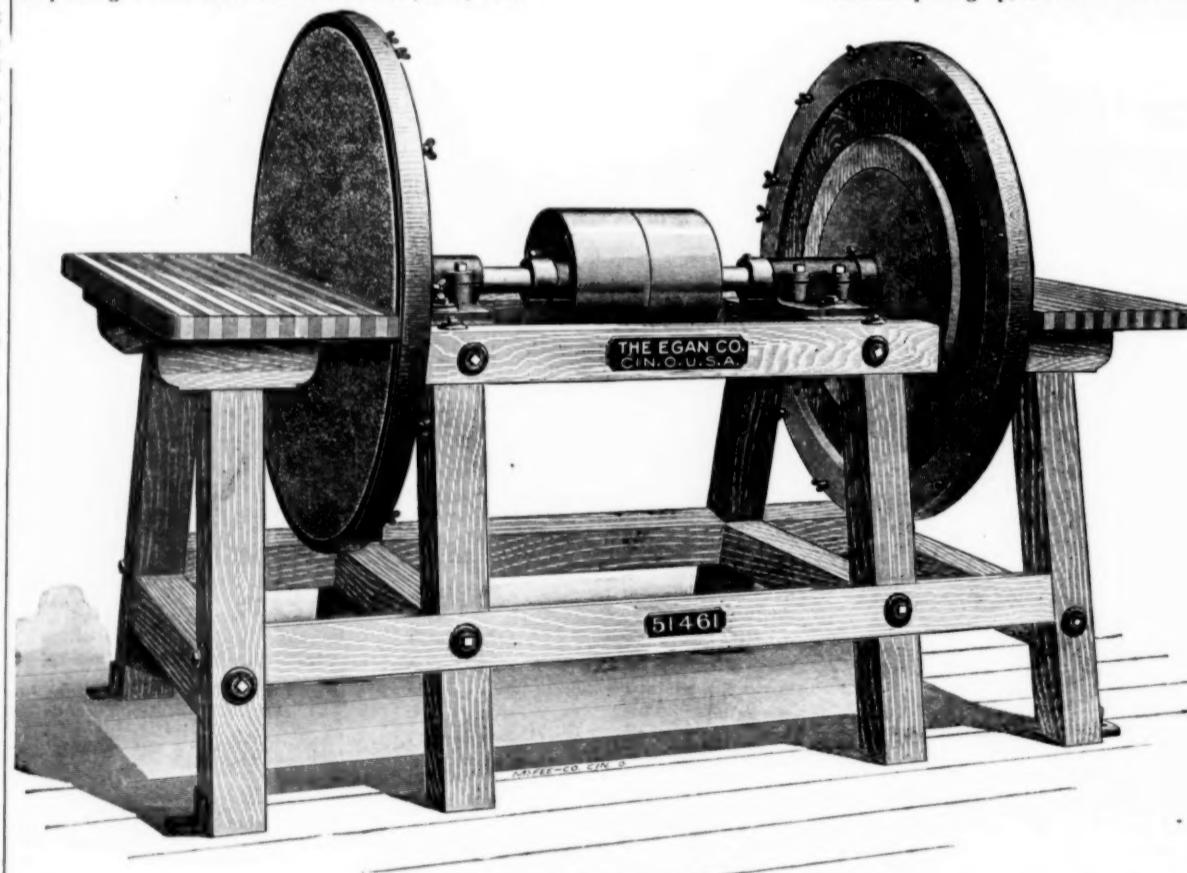


FIG. 2.

times annually. Boring bars for undercutting can be used without any danger of their pulling out of the sockets, and the labor and expense of turning over heavy pieces saved. The appearance of this tool as turned out of the factory ready for use is shown in Fig. 2. This device is made by the Cleveland Twist Drill Co., of Cleveland, Ohio.

drum sanders.

A great advantage of this machine is that two boys can operate it at one and the same time, turning out work quicker and better than can the most skilled mechanic by hand. The machine having two disks, different grades of paper, one coarser and the other finer, can be used, and in addition to squaring up, it will finish bevels of



IMPROVED DOUBLE-DISK SANDPAPERING MACHINE.

to get into the cylinder. By this arrangement lime formed in the water chamber can be easily removed.

Those interested can obtain descriptive catalogue of this engine by addressing the Nordyke & Marmon Co., 86 Day street, Indianapolis, Ind.

Improved Grip Socket.

This grip socket is designed to hold and drive taper-shank drills and other tools.

Improved Double-Disk Sandpapering Machine.

We illustrate herewith a new and improved double-disk sandpapering machine designed for general use in woodworking shops, and especially suitable for finishing short stock either flatwise or edgewise.

The frame is made of hardwood, mortised, tenoned and bolted together, so that it rests solidly on the floor at all times.

any desired angle by simply arranging a fence on one or both tables. It is valuable in box factories, in planing mills for finishing corner blocks, in furniture factories for finishing the many small articles which enter into the manufacture of furniture, in sash, door and blind factories, in agricultural-implement works, and, in fact, it is stated that there is scarcely anything in the woodworking line that cannot be brought to the machine and

turned out at less cost and to better advantage than when done by hand. There is a shop number on each machine and a number on each casting by which it can be identified. It is made by the Egan Company, Cincinnati, Ohio.

Esty Automatic Sprinkler.

We illustrate and describe herewith the Esty automatic sprinkler, which is claimed by its inventors to possess many exclusive merits and to be ahead of efforts heretofore made to produce a perfect sprinkler system. The number of parts in this sprinkler is reduced to a minimum, and in this respect it possesses a special advantage. Simplicity of construction is another feature. If melted out by fire, it can be reseated without being removed, and can be easily taken apart for inspection at any time and replaced in position.

A mica-seated valve is used, which is non-corrodible, non-adhesive, impenetrable



THE ESTY AUTOMATIC SPRINKLER.

and imperishable, and is held in place by a fusible solder-joint of but three parts. The fusible-joint projects from the centre, and therefore is more accessible to a sudden fire. The mica seat, being held in place by a centre pivot, it will stand abuse without injury. It can be used pendant or upright, as the companies suggest.

The manufacturer of this sprinkler makes them to fuse at the following degrees of heat: 165°, or the regular gilt head, 212°, 280° and 360°, the last three being for use in boiler-rooms, dryrooms and such places where the temperature rises above that of the regular head, the company making no extra charge for these higher-degree sprinklers.

These are distinguished by the different colors which the struts are painted, the 165° being left the color of the metal or gilt, the 212° being painted red, the 280° blue and the 360° black, besides being stamped with the degree of heat at which it fuses, thus making it utterly impossible to get them mixed with the regular gilt head, thus causing water damage.

The sprinkler has been officially approved and accepted by the Associated Factory Mutual Insurance Companies, the factory improvement committee of the New England Insurance Exchange, the New York Board of Fire Underwriters and others, and fully complies with the latest standard requirements of all other boards or combinations of fire underwriters throughout the United States.

Whenever the sprinkler equipment is installed by others than the company's regular authorized agents, it sends a competent man to put in the system after the piping has been approved by the insurance inspectors, the company deeming it advisable to take this course to protect the sprinkler as well as the insured, guaranteeing perfect satisfaction when the system is properly placed in position.

The efficiency of the Esty system can best be shown by a reference to a fire that occurred a short time ago at the plant of O. & E. Morrison, shoddy manufacturers, Tilton, N. H. The fire was caused by the overturning of a large Rochester lamp containing three and a half quarts of kerosene oil on about 200 pounds of stock which was piled about the card. Two sprinklers were sufficient to extinguish the flame before a man could reach a valve not more than thirty feet away. In this case new struts were adjusted and the mill running in twenty minutes, the damage being so slight that no insurance was claimed. This case is one of a dozen mentioned in a small circular issued by the company; also gives full information, prices, etc. This circular can be had by addressing the Esty Sprinkler Co., Laconia, N. H.

Improved Bending Rolls.

What is considered to be a decided advance in the production of bending rolls is the improved type of machines of this class which Bertsch & Co., of Cambridge City, Ind., are now building. A revolution in quickness of opening, closing, adjusting and ease of operating is said to have been caused by the introduction of these bending rolls. A view of this machine is shown in the accompanying illustration. The cut is a special representation of the automatic arrangement for opening, supporting and closing the top roll, and also lowering and raising the opposite end of the lower roll at the same time. This is done by simply opening and closing the bearing buckle B. This is claimed to be the greatest and most complete labor-saving device that has ever been applied to a bending roll. With it, as will appear, a large machine is opened surprisingly easy.

The horizontal steel opening lever is from six to ten inches wide, and is made from two to three inches thick in the centre, according to the size of the machine, to prevent springing.

The opening of the rolls is accomplished in five or ten seconds, according to the size of the machine, by simply disengaging this journal-bearing buckle, which, when thus removed and turned back, will elevate and support the top roll, and at the same time lower the opposite end of the bottom feed-roll sufficiently to release a formed plate of extreme width to remove same. This is automatically accomplished by the attached horizontal forged-steel lever beneath, which is operated by a lug or cam on the bearing buckle. This lever is also properly con-

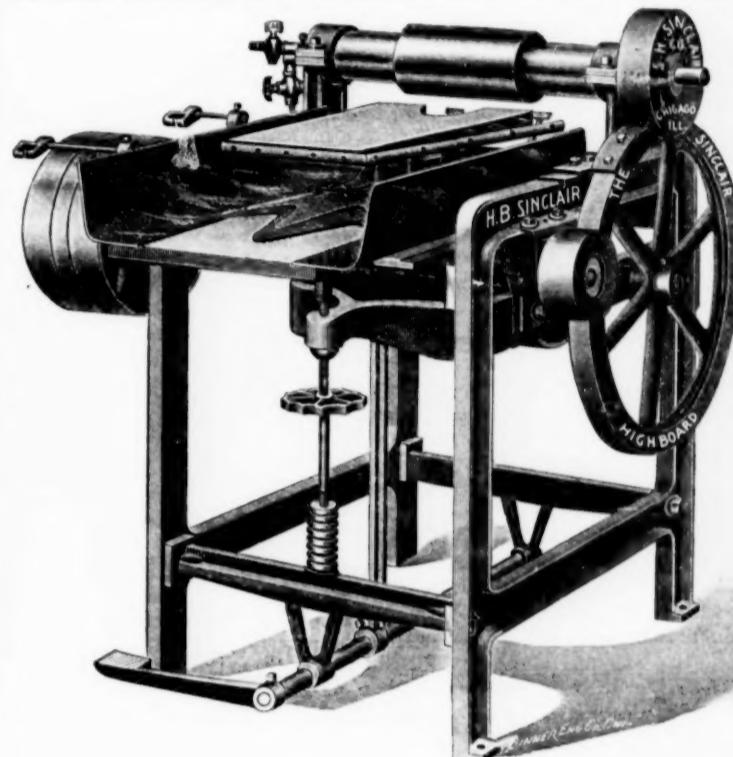
ting the top roll when opened to remove the formed metal. The bearing buckle being thus balanced, the roll is easily opened and closed, and by a slight turn of the lock screw in the centre of the buckle the machine is again ready for operation.

As the lower roll is thus self-adjusting, it need not be readjusted each time after bending a plate, unless the plate to be formed is much thicker or thinner, in which case the lower roll is adjusted at both ends by wedges, as usual, to grip the sheet to prevent slipping. The back roll being the main bending roll, either one or both ends

strong pinions and gearing throughout. Any further details that may be desired will be furnished by the manufacturers on application.

Improved Shirt-Ironer.

A recent addition to the improved laundry machinery made by the S. H. Sinclair Co., 8 and 10 South Canal street, Chicago, Ill., is illustrated herewith. It is an improved shirt-ironer, and was designed to supply a demand for more space under the surface and on the sides for the body and sleeves of the shirt, also to allow the

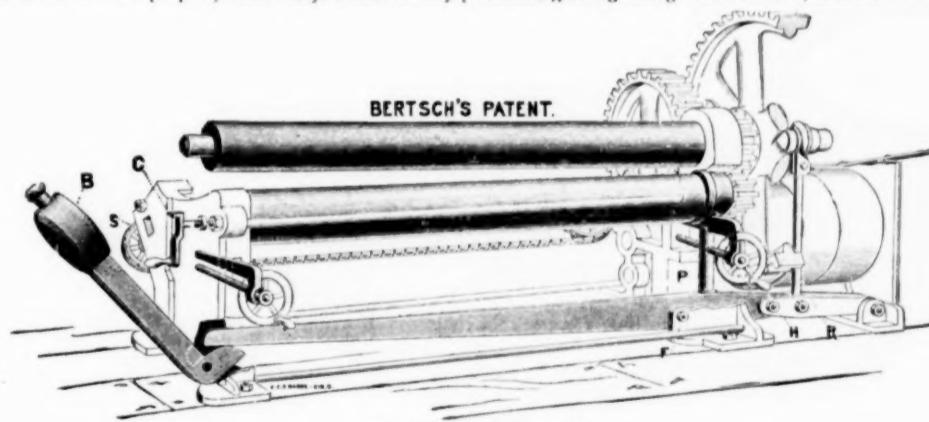


IMPROVED SHIRT IRONER.

can be quickly adjusted at one time, the adjusting screws being provided with a link-belt chain attachment. The back roll is also arranged to be adjusted by belt power.

For a general purpose roll the power adjustment is of great importance, almost indispensable for large and small shells, which require a wide range of adjustment of the back roll. Both ends of the back roll are quickly and uniformly adjusted for a large or small shell, as desired, in one-fourth of the time required by hand. This adjustment is very powerful, gearing being

prickers holding the paddling to be covered, and for a clamping device for holding the neck-band and shoulders in position. These improvements are fully embodied in the machine here shown. It is also furnished with brass instead of steel side-guards, which are more easily kept clean. The neck-band clamp, being connected to a separate lever from the shoulder clamps, is a great convenience, as each can be used independently of the other, thereby saving time when only one is required. Another important feature is the burner, which was patented in 1892, which burns



IMPROVED BENDING ROLLS.

connected to the opposite ends of the top and bottom feed-rolls.

The lower roll's adjustable bearing box, at the opposite end, is supported by a perpendicular fulcrum-post, P, which rests firmly on top of the horizontal lever in the rear of the fulcrum-pin F.

The lower roll is thus free to be raised or lowered at the opposite end automatically in conjunction with the top roll, so the top roll need not to be elevated much to open the roll to free the formed metal the entire length, and the weight of the lower roll becomes an element in raising and support-

a worm wheel and a screw running in oil, so the roll can be used for forming rounded corners by quickly raising the back roll and thus bending light or heavy plates, if not of extreme width, around the top roll, thus saving much time. Then, with the automatic device for opening the machine, the metal is quickly removed. One end of the back roll can also be adjusted independently by power for cone work. This adjustment can also be operated by hand if desired.

All the shafts, pins and screws are made of steel, and have large bearings, extra

natural gas, coal or water gas or gasoline gas. This burner is also manufactured to fit any other type of ironer, and for economy it is claimed to be unequalled. Gasoline burners are supplied when gas is not obtainable.

An Illinois colonist at Hammond, La., although totally blind, has been so successful in that section that on a tract of land of but ten acres he has raised enough fruit to net him a profit of \$3000 within a year. He believes in diversified fruit culture, and by his energy and ability has accomplished much in that line.

LUMBER.

(A complete record of new mills and building operations in the South will be found in the Construction Department, on pages 413 and 414.)

Lumber Directory.

Readers of the MANUFACTURERS' RECORD who may be in the market for lumber of any description are recommended to the directory of Southern lumber manufacturers and dealers which appears among the advertising pages.

LUMBER MARKET REVIEWS.**Baltimore.**

OFFICE MANUFACTURERS' RECORD
BALTIMORE, July 25.

In the main channels of the local lumber market the volume of trade is, as usual at this period of the season, very light, and there is no snap or vigor in the market. Leading manufacturers of yellow pine report sales for the week moderate, and commission men generally quote the market steady, with no prompt inquiry of any moment. Air-dried yellow pine is selling in small quantities, but the demand from the usual sources is not forthcoming. Dealers are only buying to supply immediate wants, and the building demand is moderate. White pine is quiet, with prices steady. In the hardwood market the activity reported a week ago has subsided to a great extent, and inquiries now are principally from out-of-town buyers; the export demand is light, and advices from European markets are still unfavorable. Dressed lumber is in fair request, and planing mills in the city are all fully employed. Box factories and other woodworking concerns are running, but some are only on half-time.

The following list represents the prices current at this date:

[The quotations for yellow pine are for cargo lots, and for all hardwoods the figures indicate values for choice car lots.]

VIRGINIA AND NORTH CAROLINA PINE.		
5-4x10 No. 2, kiln dried.....	\$16 00@	18 00
5-4x12 No. 2, " "	17 50@	18 50
4-4x10 No. 1, " "	16 50@	17 50
4-4x12 No. 1, " "	17 00@	17 50
4-4 narrow edge, No. 1, kiln dried.....	13 50@	14 50
4-4 wide edge, " " "	18 50@	19 00
6-4x10 and 12, " " "	23 00@	24 00
4-4 No. 1 edge flooring, air dried.....	14 50@	15 50
4-4 No. 2 edge flooring, " " "	11 50@	12 50
4-4 No. 1 12-inch stock, " " "	16 00@	16 50
4-4 No. 2, " " "	13 00@	13 50
4-4 edge box or rough wide.....	8 00@	9 00
4-4 " " (ordin'y widths)	7 75@	8 25
4-4 " " (narrow)	10 00@	11 00
24 narrow edge.....	6 00@	7 00
24 wide.....	6 00@	8 00
24 10-inch.....	8 25@	9 25
Small joists, 2½-12, 14 and 16 long.....	8 50@	9 50
Large joists, 3-16 long and up.....	9 50@	10 00
Scantlings, 2x3-16 and up.....	8 50@	9 50

WHITE PINE.

1st and 2d clear, 4-4, 5-4, 6-4 and 8-4	48 50@	50 50
3d clear, 4-4, 5-4, 6-4 and 8-4.....	43 00@	44 00
Good edge culls.....	14 00@	15 00
Good stock.....	16 00@	17 00

CYPRESS.

4-4x6, No. 1.....	20 00@	21 00
4-4x6, No. 2.....	14 00@	15 00
4-4x6, 16 feet, fencing.....	12 50@	13 50
4-4x6, rough.....	9 00@	9 50
4-4 rough edge.....	9 00@	9 50
4-4 edge, No. 1.....	18 00@	19 00
4-4 No. 2.....	12 00@	13 00
Gulf, 4-4, Nos. 1 and 2.....	28 50@	30 50
Gulf, 6-4, Nos. 1 and 2.....	31 00@	32 50

Walnut.

5-8, Nos. 1 and 2.....	65 00@	75 00
4-4, Nos. 1 and 2.....	80 00@	90 00
5-4, 6-4 and 8-4.....	85 00@	95 00
Newell stuff, clear of heart.....	80 00@	100 00
Culls.....	20 00@	30 00

Oak.

Cabinet, white and red, Southern, plain-sawed and good, 1 and 2, 8 inches and up, 12 to 16 feet long, 4-4.....	65 00@	75 00
Quartered white, Western, 1 and 2 quality, all figured, 6 inches and up wide, 4-4.....	53 00@	55 50
Culls.....	10 00@	15 00

Pojar.

Nos. 1 and 2, 5-8.....	24 00@	25 00
" 4-4.....	28 00@	30 00
Nos. 1 and 2, 6 and 8-4.....	32 50@	33 50
Culls.....	13 00@	16 00

SHINGLES.

Cypress, No. 1 hearts, sawed, 6x20.	7 25@	7 75
No. 1 saps, sawed, 6x20.....	5 50@	6 50
No. 1 hearts, shaved, 6x20.....	5 50@	7 50
No. 1 saps, shaved, 6x20.....	5 25@	5 50

LATHS.

White pine.....	2 70@	2 75
Spruce.....	2 15@	2 25
Cypress.....	2 15@	2 25

Norfolk.

[From our own Correspondent.]

NORFOLK, VA., July 22.

The volume of business in lumber and timber at this port during the past week was fair, but as a rule the market at the moment is quiet. A number of the leading manufacturers speak hopefully of the future

of the lumber trade of the port, and present indications point to considerable business during the fall and winter months. Receipts of lumber are less liberal, and the mills generally are not adding largely to their stocks. While there is a good general assortment to select from, there is no surplus of any particular grade or dimension. The receipts of lumber and its products at this port during the month of June, as reported by Mr. Samuel P. Borum, secretary of the Chamber of Commerce, are as follows: Lumber, 30,593,078 feet; logs, 9,850,917; staves, 600,820; shingles, 3,467,750, and railroad ties, 6,888. There has been a fair activity during the month among planing mills, and leading manufacturers report business as improving. All woodworking factories, such as box, crate and basket works, are now very busy, and their output generally large. The local building demand for lumber is improving, and from the number of improvements in progress and those projected a large amount of material will go into consumption during the fall and winter months. Rates of freight to New York and sound ports remain unchanged at \$2.25 to \$2.40, one-fifth off for dressed.

Charleston.

[From our own Correspondent.]

CHARLESTON, S. C., July 22.

A fairly active market has ruled at this port during the past week, and the tone of the lumber trade seems to be on a more healthy basis. There is a more pronounced demand for certain grades and dimensions of material, and prices are generally firm for all well-manufactured lumber. At all milling points there is a fair amount of business distributed among various mills, and orders are coming in quite freely. At Georgetown the lumber business is showing material improvement, and the volume of business shows considerable expansion. Several lumber firms are improving their plants and making a decided effort to extend their business by introducing the most approved machinery to turn out the best material. The Clyde Line is increasing its tonnage to this place, and the other facilities for manufacturing and shipping are unsurpassed. It is rumored that a company from Michigan has secured an option on a valuable mill-site near Georgetown, and next winter will build a large saw mill thereon. The business in crossties is improving, and several cargoes are going out before August 1. The shipments of lumber from this port during the week ending the 19th inst. were as follows: For New York, schooners Warwick, 508,000 feet; Nettie Shipman, 275,000 feet; Norman, 262,000 feet; Bessie Whiting, 440,000 feet; D. K. Baker, 463,000 feet, and by steamer 18,960 feet. The total clearances since September 1 amount to 65,315,611 feet coastwise and \$78,623 feet foreign, making a total of 66,194,234 feet, against 50,483,905 for the corresponding period last year. Yellow-pine lumber freights continue firm, and lumber rates to New York are quoted \$4.62½ to \$5. The last business reported in New York was the charter of a schooner, 613 tons, Charleston to New York, at \$4.75 and free wharfage.

Savannah.

[From our own Correspondent.]

SAVANNAH, GA., July 23.

The lumber market has been quite active during the past week, and the movement has been of considerable volume. There is at present a good demand for the better grades of lumber, and prices are very firm, with holders asking outside figures. Manufacturers are generally well satisfied with the present outlook, and everything indicates a good market during the summer and fall months. From the various milling sections of the State reports show an active business everywhere, and mills are all well supplied with orders. There is a good inquiry and demand for timber and car sills,

which have lately advanced from 50 cents to \$1 per 1000 feet. The market closes firm with quotations as follows: Ordinary sizes, \$11 to \$12; difficult sizes, \$13.50 to \$18; flooring boards, \$15 to \$22; shipstuffs, \$16.50 to \$20, and sawn ties, \$10. The market for lumber charters is steady at ruling rates, with foreign rates more or less nominal. The rates from this and nearby ports of Georgia are quoted at \$4.25 to \$5 for a range including Baltimore and Portland, Me.; to the West Indies and Windward rates are nominal; to Rosario, \$12 to \$14; Buenos Ayres and Montevideo, \$10 to \$12, and to Rio Janeiro, \$14. Steamer rates to New York and Philadelphia are steady at \$7, to Boston \$8, and Baltimore \$5 per thousand feet. The following shipments of lumber are reported for the week: Schooner Walter W. Rasin, 495,100 feet and 53,000 shingles; Isabella Gill, 441,201 feet, and Ida Lawrence, 376,250 feet, all for Baltimore. The schooner Lulie L. Pollard cleared for Philadelphia with 112,000 feet of lumber and 9,195 railroad ties, and steamers took out 162,900 feet. Schooner Jennie Thomas cleared for Baltimore with 8937 crossties measuring 317,925 feet, and schooner John R. Halliday with 303,362 feet. Steamers for New York took 526,330 feet and 375,000 shingles. Boston steamers took 320,000 feet and 5246 staves.

Mobile.

[From our own Correspondent.]

MOBILE, ALA., July 22.

Midsummer dullness has settled down upon the lumber and timber market in this section, and trade continues quiet. There is, however, a slight movement, with shipments steady, but not of great volume. There is more inquiry from Central and South America, and as political disturbances become settled the demand from these sources will return. The timber trade continues very quiet, with shipments hardly worthy of comment. Hewn timber is still quoted at 10 to 11 cents per cubic foot for 100 feet average and classing B1 good; hewn poplar, 10 to 11 cents per cubic foot; sawn timber is dull at 9 cents per cubic foot, basis of forty feet average; saw logs are dull and easy at \$4 to \$6 for pine delivered at mill. There is a good demand for cypress at 5 to 10½ cents per cubic foot, according to average. The movement in lumber has been light, some 800,000 feet having been shipped and distributed as follows: Schooner O'Neill for New York with 395,651 feet; steamer Jari for Bocas-del-Toro, Nicaragua, with 27,000 feet; bark Stanhope for Aux Cayes, Hayti, with 175,000 feet; Bessie Whiting, 440,000 feet; D. K. Baker, 463,000 feet, and by steamer 18,960 feet. The total clearances since September 1 amount to 51,945,869 feet, against 62,772,354 feet for the corresponding period last year.

Beaumont.

[From our own Correspondent.]

BEAUMONT, TEXAS, July 20.

The past week in this section has been characterized by a steady and uninterrupted output of lumber, and the general market is now in a most satisfactory condition. The demand from dealers is active, and transactions are made at list figures, with no concessions in favor of buyer. Orders for timber are coming in freely, and mills are generally well supplied. For all railroad material there is a good demand, and ties and timber have both advanced, sales for the past week showing a higher range made at Galveston. The Journal in its weekly review says: "There has been a good flow of orders from dealers during the week, each day showing an improvement upon the number received during the day preceding. Still there is no evidence that dealers are stocking up; they are merely ordering more because the local demand has already improved." As to the future

outlook for lumber in this section, expert millmen say that the prospect for trade was never better. A very active demand for lumber is expected as soon as crops begin to move, and improvements will at once be in order, creating a sharp demand for material. The number of sawing orders coming to hand is greater than at any time during the past three years, and at Orange and Lake Charles and throughout the longleaf section the same conditions exist as to the demand. There is also a good export business in progress, the following vessels now loading at Sabine Pass: The schooners Sophia Kirk with 860,000 feet of lumber for Rosario; H. W. Palmer with 430,000 feet for Bahia, and the Jeannie Woodside with 860,000 feet for Santos, all cleared by the Consolidated Export Co. The Reliance Lumber Co. has furnished the cargo for steamer Sunniva, which clears today. The sales of lumber by the Beaumont Lumber Co. for the six months ending June 30 amounted to 13,517,436 feet, and the Nona Mills Co. 7,747,805 feet, a total for the two mills of 21,265,241 feet. The total shipments of lumber from this city for the six months ending June 30 were 7968 carloads, against 8201 carloads in 1894.

St. Louis.

[From our own Correspondent.]

ST. LOUIS, MO., July 22.

There is every indication that the coming season in the lumber and timber market of this city will be one of the most active and prosperous for some years. The continued good crop reports come from all sections of the State, and the demand for lumber, which is usually light in midsummer, is at present improving in certain channels. Railroads expect to move a large crop, and from this source there will be a large demand for car material. Inquiries at local offices of yellow-pine and hardwood mills indicate that a number of car orders will soon be placed. Nearly all yellow-pine dealers report a good business during the week, and a larger number of orders have been placed than expected. Prices for yellow pine are very firm, and an advance in the near future all along the line is expected. Stocks of yellow pine throughout the country are not excessive, and as the output has been restricted, there is at present no large surplus on hand. The white pine trade is moderate, and the demand is generally above the average at this period of the season. On account of the large building operations throughout the city and suburbs, the local demand is heavy. The movement of lumber here during the present month has been heavy, and shipments show a large increase over those of the corresponding week last year. For the week ending the 17th inst. the rail receipts were 1045 cars, river receipts were 114,000 feet and shipments were 688 cars. The figures for the corresponding week last year were 1065 cars, river receipts 163,000 feet and shipments only eighty cars. The sash and door market is quiet, but orders continue to come in more freely than usual at this period of the season. Planing mills are generally busy, and there has been no change in the general price-list.

Lumber Notes.

THE saw mill of the Woodworth Lumber Co., at Monroe, La

Co., Limited, on Falling Water creek, has erected a saw mill on the property, and is now cutting from 8000 to 10,000 feet a day.

THE West Falls Co. of Baltimore, for dealing in lumber, was incorporated on Tuesday last by Edward M. Brown, Lewis L. Clegg, John E. Smith, William A. Casler, of Baltimore, and Charles E. Corkran, of Baltimore county. The capital stock is \$5000.

IT is stated that news was received at Mobile on the 19th inst. of the destruction by fire of a new saw mill which has recently been erected by two Northern men at Lumberton, Miss. The fire originated in the dryhouse, and the loss is estimated at \$15,000 to \$20,000, with no insurance.

THE Reliance Lumber Co., of Beaumont, Texas, on the 15th inst. booked an order for five straight cars of yard-stock lumber at the list price promulgated at the recent meeting of the Lumber Manufacturers' Association at Galveston. The order, while not unusually large, indicates a firm and healthy tone to the general market.

AT a meeting of the Northwestern Lumber Manufacturers' Association, held at Seattle, Wash., on the 19th inst., the price of rough lumber to Eastern buyers was advanced to \$7 per thousand; first-grade flooring advanced to \$18, drop sidings to \$14, bevel siding to 14.50, and finished cedar at \$26 to \$34 per thousand. The meeting was largely attended.

THE receipts of lumber at New Orleans for the week ending July 19, as reported by the secretary of the Mechanics, Dealers and Lumbermen's Exchange, amounted to 1,298,000 feet, and since September 1, 1894, the receipts were 73,420,490 feet, against 68,135,810 for the corresponding period of 1893-94. The receipts of shingles for the week were 200,000 and of laths 30,000.

THE semi-annual meeting of the lumbermen of Arkansas was held last week at Little Rock with President L. J. Best, of Reardon, in the chair. There was a good attendance of the leading representative firms in the State present. Fire insurance upon lumber and mill property was the first subject for discussion. The immigration movement was a prominent topic before the meeting, and after a lengthy discussion a committee was appointed to consider the formation of an immigration bureau and report at the next meeting.

THE lumber trade of Jacksonville, Fla., was unusually brisk during the past week, and shipments were heavier than any previous week during the present year. Among the vessels cleared with lumber cargoes were the following: Schooners Mary F. Carson with 220,000 feet and E. H. Smith, 360,000 feet, all for New York. The British schooner Preference sailed for Santo Domingo City with 190,226 feet; Anna V. Lamson with 275,000 feet and Eliza A. Scribner with 260,000 feet, both for Philadelphia. The Clyde steamers took out about 1,250,000 feet, 4000 crossties and 6700 bundles of shingles.

SECRETARY HERBERT, Commodore Hitchborn, chief of the construction bureau; Contractor Tyler and Commodore Cook, acting chief of the bureau of navigation, witnessed a test in the engine-room of the department at Washington on the 18th inst. of wood prepared by an electric fire-proofing method. A piece of yellow pine was put in the furnace and subjected to 1000 degrees heat for five minutes. When taken out it was charred or carbonized about half an inch on each side. The carbon formed a protection, and the wood charred slower as it was formed. A piece of ash was similarly treated with like result. The test being satisfactory, it is the intention of the department to adopt this method with the wood to be used in the new gunboats where there is need of protection from fire.

PHOSPHATES.

Stock of Phosphate in Florida.

Mr. C. S. Clarke, secretary of the Florida Miners' Association, in a letter to the MANUFACTURERS' RECORD says: "It having come to the knowledge of the meeting of the Florida Miners' Organization held on July 16 last that reports had been circulated through the medium of certain Hamburg dealers to the effect that the stocks in Florida amounted to about 140,000 tons of high-grade rock, accurate information on this subject was obtained from the meeting, which was a representative one, and after making every possible allowance, it was decided by the meeting that the stocks on top of the ground did not exceed 80,000 to 90,000 tons. Out of this quantity at least half is already contracted for, and 10,000 tons is not available for shipment in consequence either of its distance from shipping points or from its quality. The amount of rock at present available does not, therefore, exceed 30,000 to 40,000 tons, and the greater part of this is held by the Associated Company and will not be offered under the present unnatural condition of prices. On the other hand, it is doubtless true that large sales have been made which have not so far been covered by purchases in Florida. The meeting seemed to think that this condition of affairs ought to be made known, and they believe same to be accurate."

A leading phosphate dealer of Baltimore in an interview with the MANUFACTURERS' RECORD said: "It is currently reported in England and on the Continent that the hard-rock combination has gone to pieces, and that there is a surplus of over 70,000 tons of hard rock on hand on which banks have made advances, and that this surplus must soon be dumped on the market. In consequence of this the trade is demoralized; buyers fear to make present or future engagements and quotations given out by dealers are at ridiculously low figures. Miners would do well to see that their interests are watched across the water and fair and true reports made in those markets of existing conditions, for we know that general operations in mining, both land and pebble, have nearly ceased in all sections, owing to present low prices."

Phosphate Markets.

OFFICE MANUFACTURERS' RECORD,
BALTIMORE, July 25.

In the local phosphate market during the past week there has been a light volume of business, and the demand from manufacturers is inactive. From points of production the reports are unchanged, and in South Carolina the work of development among both land and river miners is progressing satisfactorily. The market at Charleston is quiet, with a fair inquiry from domestic ports, but a very light foreign demand. In Florida the industry at present is not by any means active, and a number of mines are closed down indefinitely. Prices are so low that the work of development will be restricted until a higher range of values prevail. In the local market during the past week the following charters were closed: Schooners R. S. Derby and Douglass Gregory, Ashley river to Baltimore; C. L. Godfrey, Charleston to Cartaret, N. J.; Robert G. Dunn, Tampa to Cartaret, N. J.; Annie G. Grace, Ashley river to Norfolk, and Oliver T. Whittier, Beaufort to Baltimore. The only arrival reported was the schooner S. B. Martz from Charleston with 875 tons of phosphate rock.

The freight market in New York has been quiet during the week, but at the close a better volume of business was reported. In phosphate charters the following are reported: A schooner, 783 tons, Tampa to Alexandria, Va., at \$2.35; a British steamer, 1113 tons, from Port Royal to Dublin or Hull at 12s., chartered abroad; a British

steamer, 1159 tons, from Port Royal to the United Kingdom on private terms, chartered abroad, and a bark, 470 tons, from Charleston, S. C., to Norfolk at \$1.90.

FERTILIZER INGREDIENTS.

The general market is quiet, with prices unchanged, and in the leading ammoniates there are few transactions reported. The demand at the moment is light, and stocks of blood and tankage in the West are not excessive. There is a better demand for nitrate of soda, which is reported scarce. All other material is dull and featureless.

The following table represents the prices current at this date:

Sulphate of ammonia, gas.....	\$2 75@	\$—
Sulphate of ammonia, bone.....	2 65@	—
Nitrate of soda.....	1 75@	—
Hoop meal.....	1 80@	—
Blood.....	1 85@	—
Azotine (beef).....	1 75@	—
Azotine (pork).....	1 75@	—
Tankage (concentrated).....	1 65@	—
Tankage (9 and 20).....	1 65 and 10	—
Tankage (7 and 30).....	15 50@ 16 00	—
Fish (dry).....	21 00@	—
Fish (acid).....	15 00@	—

CHARLESTON, S. C., July 22.

The week has been rather quiet for the phosphate market; trade has been light and sales not so brisk. The local factories are purchasing in very small lots, most of them having carried over large stocks of manufactured goods. Foreign shipments from the river companies are heavy, and they report steady and active mining. The prices are \$3 crude, \$3 50 hot-air-dried and \$6.50 ground rock, all f. o. b. Charleston. The coastwise shipments for the week were: Fannie Brown, 809 tons for Richmond; L. V. Bee, 1025 tons for Alexandria, Va.; O. C. Schmidt, 775 tons for Philadelphia; steamship Laurada, 1150 tons acid phosphate for Baltimore; steamship Cherokee, 886 tons ground rock for New York. In port and loading are T. W. Dunn, Rob Roy, A. D. Bacon, W. W. Converse, R. S. Derby, Fannie Reiche. The coastwise shipments since September 1 were 91,142 tons crude and 1,405 tons ground rock, against 115,602 tons crude and 4,837 tons ground rock for same date last year.

Phosphate and Fertilizer Notes.

THE British steamship Nevassa cleared from Savannah last week with 2344 tons of phosphate rock, valued at \$23,443, by Strachan & Co.

A NEW berth on the north side of the docks at Port Tampa, Fla., has just been completed, and the workmen are ready to put up the big phosphate elevator. The woodwork is now being framed, and the elevator will probably be in working order in about six weeks. It will have a capacity of 250 tons an hour. It will be operated by electricity.

AN adjourned meeting of the Southern Fertilizer Association was held in Atlanta last week with Mr. W. A. Clark in the chair, and Mr. H. M. Tucker, Jr., of Charleston, as secretary. The question of a decrease in the manufacture of fertilizers was first considered. A number of addresses were delivered on the subject of curtailing the output, and it was the unanimous opinion that steps should be at once taken to limit production.

THE new Southern Phosphate Works, at Macon, Ga., is now practically completed, and will resume operations on August 1. The main building will be about one third larger than the old one. The dimensions, when completed, will be 370x110 feet. The acid chambers will be larger, being now 280x40 feet. The capacity of the plant has been increased about 3000 tons. The entire plant will be in full operation about the latter part of September.

THE shipments of phosphate from the port of Punta Gorda, Fla., from July 1 to 13, inclusive, as reported by Deputy Collector K. B. Harvey, are as follows: 1st, steamship Carolina for King's Lynn, England, 2225 tons; 3d, steamship Serra for London, 2893 tons, and steamship Rossire for Glasgow, 2512 tons; 10th, steamship

Miria for Bristol, 2724 tons, and 13th, steamship Alicia for Plymouth, England, 3036 tons—total 13,390 tons, all shipped by the Peace River Phosphate Co.

THE shipments of phosphate rock from Charleston, S. C., for the week ending the 19th inst. were as follows: Schooner S. B. Martz, 794 tons, and steamship Laurada, 1150 tons, both for Baltimore; Oscar C. Schmidt, 775 tons for Philadelphia; Leander V. Beebe, 1025 tons for Alexandria, and Fannie Brown, 800 tons for Richmond, Va. The total shipments since September 1 amount to 87,052 tons domestic and 3490 tons foreign, against 103,335 tons coastwise and 12,267 foreign for the corresponding period last year.

ON account of the shutting down of the hard-rock phosphate mines recently, the shipments through the port of Fernandina, Fla., have been light for the present month. All the shipments of phosphate for July have been made except one. The following is a list of the shipments to the 22d inclusive: 10th, steamship Remus for Hamburg, 2540 tons, by the Pebble Phosphate Co.; 17th, steamship Whitby for Hamburg, Germany, 2750 tons, by A. Thalheim; 11th, steamship Sand Hill for Rendsburg, Germany, 2200 tons, by A. Neuman—total 7490 tons. The schooner Blanche Hopkins is expected soon to take a cargo of 500 tons for Baltimore from the Williams & Swan mines. This will make the total for July 8390 tons.

THE meeting of hard-rock phosphate miners under the name of the Florida Miners' Organization held at Ocala on the 16th inst. resulted in the election of the following officers for the ensuing year: W. E. Nichols, of the Chicago-Florida Phosphate Co., president; A. D. Wright, of High Springs, and D. E. Brooks, of Fort White, vice-presidents; Charles S. Clarke, of the firm of Thuillier & Clarke, secretary and treasurer. The board of directors appointed consisted of J. W. Tullis, of the Perrin Phosphate Co.; J. V. Burk, of the Florida Syndicate Mines; B. Arentz, of B. Arentz & Co., and G. M. Wells, of the Wells Phosphate Co. After the election of officers the articles of agreement were presented and signed by twelve of the largest companies. The meeting was one of much importance to the entire State, and was, it is said, entirely harmonious. The next meeting will be held at Gainesville, Fla., on August 6.

THE Southern Cypress, Lumber and Shingle Association held its regular monthly meeting last week in New Orleans. Mr. G. M. Bowie, of Whitecastle, La., presided, and Mr. J. G. Brugelton acted as secretary. There was nothing but routine work transacted. The comparative stock showed the following to be now available: Total lumber, all grades green and dry, 45,000,000 feet; total shingles, all grades green and dry, 39,000,000. A general discussion of the shingle interests of Louisiana and Arkansas was engaged in, resulting in nothing of a definite character. The next meeting will be held on the second Tuesday in August.

Safety and Speed.

There are just two great considerations in traveling. The first, of course, is safety; the second, speed. People that have regard for these two essentials are pretty apt to go between Boston and New York by the Norwich Line. It is the safest of the Sound lines, because the route lies entirely within Long Island Sound, and then it is the fastest of the Sound lines.

When you visit New England ask for tickets via the safe and reliable Norwich Line at all the principal ticket offices in Philadelphia, Washington, Baltimore, Harrisburg and all points South and West. Passengers for Boston and the East can procure tickets by the Norwich Line and thus avoid the inconvenience of carriage transfer in New York, as steamers leave the pier adjoining Pennsylvania Railroad ferry, foot of Desbrosses street.

MANUFACTURERS' RECORD.

[July 26, 1895]

Iron Markets.

CINCINNATI, July 20.

All aspects of the iron market continue to look sound and promising, but so far as current business in pig iron is concerned, it partakes of the midsummer spirit. Sales the past week have been only moderate in volume, but prices are well sustained; indeed, offerings have been very light. There is a marked absence of the hard pushing to secure new business which has characterized all branches of the iron trade during the long decline of prices. Both furnaces and mills being crowded with orders and looking for better things in the fall are not disturbing the summer rest of buyers very much.

The thing about the market that makes the producer confident is the heavy consumption; there is no doubt about that. While all active furnaces are shipping their full output, and stocks are being drawn upon to the extent of 100,000 tons a month, there is no sign that buyers are getting too much iron for current use; on the contrary, many are hurrying forward shipments on contracts to prevent running out of raw material.

It is quite natural that large consumers having heavy contracts for iron at prices ruling before the advance should wait before placing further orders until very sure that the market will stand. This they are doing, but in the meantime the thousand and one smaller concerns are coming along with their wants that in the aggregate are large.

There is no increase of production in the South; in fact, the prolongation of the coal and coke troubles in Virginia keeps several furnaces idle that were active during the entire panic period. Reports are received of preparations for starting several furnaces in Central and Eastern Pennsylvania.

The Pennsylvania lines West placed orders for 500 cars early in the week, dividing the business between Jeffersonville and St. Charles. The big crop that is now almost assured makes certain large orders for rolling stock in the fall.

We make no change in quotations, which are for cash f. o. b. Cincinnati:

Southern coke No. 1 foundry.....	\$12 00@ \$12 25
South. coke No. 2 fdry. and No. 1 soft.....	11 50@ 11 75
Lake Superior coke No. 1.....	12 50@ 13 50
Lake Superior coke No. 2.....	12 00@ 13 00
Hanging Rock charcoal No. 1.....	15 50@ 17 00
Tennessee charcoal No. 1.....	13 50@ 14 50
Jackson county silvery No. 1.....	14 00@ 15 00
Southern coke, gray forge.....	11 00@ 11 50
Southern coke, mottled.....	10 75@ 11 00
Standard Alabama car-wheel.....	15 00@ 16 00
Tennessee car-wheel.....	15 50@ 15 00
Lake Superior car-wheel and malleable.....	14 25@ 14 75

We quote for cash delivered Boston:

Alabama No. 1 foundry.....	\$14 00@ \$14 25
Alabama No. 2 fdry. and No. 1 soft.....	13 50@ 13 75
Alabama No. 3 fdry. and No. 2 soft.....	13 25@ 13 50
Alabama No. C. C. car-wheel.....	18 00@ 18 50
Strong L. S. coke iron No. 1 foundry.....	15 00@ 15 75
Lake Superior charcoal car-wheel.....	16 50@ 17 00
American-Scotch (Northern) No. 1.....	15 00@ 15 75
Jackson county silvery No. 1.....	17 00@ 17 50

ST. LOUIS, July 20.

Sales run a little light in comparison with the last six weeks, but if comparison is made with July a year ago, they are remarkably heavy. Shipments are going forward on orders at a rapid rate, and it looks as though the iron shipped was going into consumption. The outlook with the foundries and mills has seldom been better.

We quote for cash f. o. b. St. Louis:

Southern coke No. 1.....	\$12 50@ \$12 75
Southern coke No. 2.....	12 00@ 12 25
Southern coke No. 3.....	11 75@ 12 00
Southern gray forge.....	11 50@ 12 00
Southern charcoal No. 1.....	14 50@ 15 00
Ohio softeners.....	14 00@ 14 50
Lake Superior car-wheel.....	14 50@ 15 00
Southern car-wheel.....	16 00@ 16 50
Genuine Connellsburg coke.....	4 75
West Virginia coke.....	4 75

CHICAGO, July 20.

The week closes with a feeling of continued strength and firmness on the part of sellers and frequent inquiries for quantities ranging from 100 to 1000 tons on the part of buyers. The most important event was the purchase of a large lot of Southern charcoal and coke iron by one of the leading car manufacturers.

Difficulty of several foundries to get iron supplied promptly on their contracts is re-

ported, caused by the delay on the part of both Northern and Southern furnaces by not keeping up with orders. This proves to be true the statements which are so frequently made, that furnaces are being crowded to their fullest capacity for shipments and the foundries are using the iron as fast as received.

There has been a sharp demand for car wheels, which seem to be very scarce. Several sales of round lots were made.

We quote for cash f. o. b. Chicago:

Southern coke No. 1 soft & No. 2 fdry.	\$12 50@ \$12 75
Southern coke No. 2 soft & No. 3 fdry.	12 25@ 12 75
Ohio Scotch softeners No. 1.....	13 50@ 14 00
Lake Superior charcoal Nos. 1 to 6.....	14 00@ 14 50

PHILADELPHIA, July 20.

Sales of pig iron have been moderate this week. The proportion of charcoal iron has been unusually large, indicating improvement in car-wheel and malleable lines. Bessemer pig is the strongest feature of the market because of its scarcity. Quite a number of furnaces in Eastern Pennsylvania are preparing to go in blast, but there is enough increase in consumptive capacity probably to take up the product.

We quote for cash f. o. b. Philadelphia:

Standard Alabama No. 1 X.....	\$13 75@ \$14 00
Standard Alabama No. 2 X.....	13 00@ 13 25
Standard Southern No. 1 soft.....	13 00@ 13 25
Lake ore No. 1 X.....	14 75@ 14 75
Lake ore No. 2 X.....	14 25@ 14 75
Lake Superior charcoal.....	15 25@ 15 50

We quote for cash f. o. b. New York:

No. 1 standard Southern.....	\$13 75@ \$14 00
No. 2 standard Southern.....	13 00@ 13 25
No. 1 standard soft.....	13 00@ 13 25
No. 1 foundry lake ore coke iron.....	14 75@ 15 25
No. 2 foundry lake ore coke iron.....	14 25@ 14 75
Lake Superior C. C.....	15 25@ 15 50

BUFFALO, July 20.

The foundry iron in this field continues steady and strong, with a volume of business above the average, but without excitement. There is more disposition now on the part of buyers to cover forward deliveries, which seems to suit the furnaces as well or better than early deliveries, as nearly all are sold up heavily for the next three or four months. Inquiry runs chiefly for strong foundry irons and softeners.

Charcoal brands, which still remain relatively the cheapest thing on the market, are meeting with only moderate sale.

The most popular Southern grades used as softeners in this field are virtually out of the market, and deliveries on old contracts slow.

We quote for cash f. o. b. cars Buffalo:	
No. 1 foundry strong coke iron Lake Superior ore.....	\$ — @ \$13 75
No. 2 foundry strong coke iron Lake Superior ore.....	\$ — @ \$13 75
Ohio strong softener No. 1.....	\$ — @ \$13 25
Ohio strong softener No. 2.....	\$ — @ \$13 75
Jackson county silvery No. 1.....	\$ — @ \$13 50
Southern soft No. 1.....	\$ — @ \$13 50
Southern soft No. 2.....	\$ — @ \$13 00
Hanging Rock charcoal.....	\$ — @ \$18 50

ROGERS, BROWN & CO.

TRADE NOTES.

MR. NISBET WINGFIELD, of the firm of J. N. Hazlehurst & Co., Atlanta, Ga., general contractors and engineers, has been elected a member of the American Society of Civil Engineers.

THE main office of the Georgia Slate Co. has been removed from Knoxville, Tenn., to Rockmart, Ga. This change was made to secure the advantages to be obtained by having the office at the place of production. A great increase is reported in the company's business.

A NEW device for extracting turpentine is being introduced with much success in the naval stores sections of the South. J. G. Schuler, of Westlake, La., is the inventor of this device. Recently a carload of cups made by the Meridian Pottery Co., Meridian, Miss., was received at Westlake to be used for this process the coming season.

THE Cleveland Gas Engine Co., of Cleveland, Ohio, which has just been organized for the purpose of manufacturing gas and gasoline engines from one to ten horse-power, is now getting its building in shape for the machinery. Contract has been given the Lodge & Davis Machine Tool Co., of Cincinnati, Ohio, for the entire equipment of machine tools.

A CHEERING summary of the business outlook is given by the Jeffrey Manufacturing Co., Columbus, Ohio. It reviews the situation as follows: "During the entire year we have run our full force, and for a number of months a large night force. The present outlook is good, and we see no rea-

son for any dropping off of orders. Our new specialties in the conveying line are receiving recognition everywhere, while our coal mining machinery continues to grow in favor."

OFFICES of the Sturtevant Mill Co. have been moved into quarters at the large new works of the company, Harrison Square, Boston, Mass. Special advantages are now enjoyed in showing at all times to office visitors rock emery mills and millstones in process of construction and operation. Visitors can bring material and see a practical test of the ability of these mills to grind it to their satisfaction. Besides the well-known Sturtevant giant crushers and grinders and the rock emery vertical and horizontal mills and millstones, this company manufactures many of the older machines found in rock-reducing plants. A record for remarkable durability is also being made by the grain and cottonseed millstones of this concern.

COMMERCIAL Rosendale cement is being largely employed in buildings where durability and strength are important requirements. The wide use of this cement is to be attributed to the superior quality of the product. It is now being used in South Carolina on the construction work for the following concerns: Clifton Manufacturing Co., Clifton; Gaffney Manufacturing Co., Gaffney; Tuscarora Mills, Wellford; Cherokee Falls Manufacturing Co., Blacksburg; Blacksburg Sulphuric Acid & Phosphate Co., Blacksburg; Poe Manufacturing Co., Greenville; Langley Mills, Langley. The Commercial Wood & Cement Co., of Philadelphia, Pa., is the sales agent for this and number of other cements. William M. Bird & Co., Charleston, S. C., are Southern agents.

"DIXON'S Graphite Pipe-Joint Compound," under one or the other of its several names, has been in the market for about twenty years. It is not only useful for joints and all steam, gas and water piping, but is equally useful for smearing gaskets and flange joints of meters, traps, and for bolts, screws, etc. In the mills, mines and factories of the Dixon Company this compound has been used in preference to any other article, it being regarded as superior both in usefulness and economy to red lead, and the Dixon Company recommends it as such with the fullest degree of certainty. That the company is not prejudiced in its favor is shown by the testimonials of its customers, among whom are manufacturers of steam and hot air radiators and heating appliances, iron companies, machinists, engineers and contractors, railroad companies, gas companies and general manufacturers.

SALES of the flour-mill machinery made by August Wolf & Co., Chambersburg, Pa., continue to add to the wide endorsement given this firm's product. John T. Pensinger, a representative of this firm, lately closed contracts with the Mecklenburg Mills, Charlotte, N. C., to build a 75 barrel roller system flouring mill; Bancroft Bros., Newry, Pa., a 40-barrel mill; Renwick & Hale, Calloways, Va., a 30 barrel roller mill, and James Everhart, Newport, Pa., a 40 barrel mill at Duncannon, Pa. Through its Kansas City, Mo., office the firm has secured contract for building a 125-barrel mill for the Blue Valley Milling Co., Holmesville, Neb. J. W. Heck, representing the Kansas City office, has also closed contract with the Brooks Milling Co., McCune, Kans., for a 100 barrel roller mill. M. N. Hartz, general agent of Wolf & Co., has been awarded contract by James T. Cline, Strinestown, Pa., for building a 30 barrel flour mill.

AMONG the recent sales of the National feed-water heater, manufactured by the National Pipe Bending Co., New Haven, Conn., are 250 horse-power to American Horseshoe Co., Phillipsburg, N. J.; 250 horse-power to Coney Island & Brooklyn Railroad Co., Brooklyn, N. Y.; 150 horse-power to Cottage City, Mass.; 200 horse power to Augusta, Ga.; 100 horse power to Richmond, Va.; 100 horse-power to Muncie Electrical Works, Whitehall, Ill.; 150 horse-power to Manhattanville, N. Y.; 500 horse-power to Steinway Railway Co., Astoria, L. I.; 100 horse power to R. D. Nuttall Co., Allegheny, Pa.; 100 horse-power to Howard F. Smith, Groesbeck, Texas; 150 horse-power to Parkersburg, Pa.; 150 horse-power to Aurora Cotton Mills, Burlington, N. C.; 300 horse-power to Wakefield & Stoneham Street Railway Co., Wakefield Centre, Mass.; 400 horse power to Arkansas Valley Smelting Co., Leadville, Colo.; 600 horse-power to Salmon Falls Manufacturing Co., Salmon Falls, N. H.; 650 horse power to Essex, Mass.; 150 horse power to Brooklyn, N. Y.; 200 horse-power to New York; 200 horse-power to Seymour Manufacturing Co., Seymour, Conn.; 125 horse power to Atlantic Starch Works, Westport, Conn.; 150 horse-power to Salem, Ohio; 100 horse-power to Gloucester, Mass.; 200 horse-power to Jamestown, N. C.; 200 horse-power to Crawford Manufacturing Co., Hagerstown, Md.; 100 horse-power to Atlantic Coast Electric Railroad Co., Asbury Park, N. J.; 150 horse-power to Crompton Association, Worcester, Mass.; 250 horse-power to Ramseur, N. C.; 200 horse-power to Linwood Mills, North Adams, Mass.; 200 horse-power to Torrington Electric Light Co., Torrington, Conn.; 200 horse-

power to Virginia Pyrites Mining Co., Mineral City, Va.; 200 horse-power to Monohansett Manufacturing Co., Putnam, Conn.; 100 horse power to New York; 200 horse power to Boston, Mass.; 2700 horse power to Holyoke Street Railway Co., Holyoke, Mass.; 125 horse-power to E. Schnitzler, Asbury Park, N. J.; 100 horse power to S. E. Vaughn, Edgeworth Station, Mass.; 150 horse-power to J. J. McComb, Hastings-on-Hudson, N. Y.; 300 horse power to Overman Wheel Co., Chicopee Falls, Mass.; 250 horse power to Mt. Pleasant Mills Corporation, New Bedford, Mass.; 300 horse power to Reading Electric Light Co., Reading, Mass.; 200 horse-power to South Middlesex Street Railway Co., South Framingham, Mass.; 250 horse power to North Andover Mills, North Andover, Mass.; 150 horse-power to Berkeley Woolen Co., Spencer, Mass.; 300 horse power to W. P. Watrous, Key West, Fla.; 300 horse-power to Standard Horse Nail Co., New Brighton, Pa.; 125 horse-power to Hamilton Water Works, Hamilton, N. Y.; 600 horse power to San Francisco, Cal.; 200 horse power to Baldwinville N. Y.; 800 horse power to Eddyville Mill, Kingston, N. Y.; 800 horse-power to Arlington Mills, Lawrence, Mass.; 500 horse power to New Haven Electric Co., New Haven, Conn.; 150 horse-power to Eleanor Iron Works, Hollidaysburg, Pa.; 200 horse-power to National Folding Box & Paper Co., New Haven, Conn.; 300 horse power to Petree Machine Co., Newton Upper Falls, Mass.; 250 horse power to Pond Decker Lumber Co., Deckerville, Ark.

CHARLOTTE, N. C.—The Buford Hotel, Charlotte, N. C., has recently been remodeled and refitted, and is receiving a liberal share of patronage. The new proprietors, Messrs. Fairintosh & Amer, are both experienced hotel men, and every department is in the hands of capable assistants.

Rehoboth—Train Service from and to Baltimore.

The Pennsylvania Railroad Co. announces that, commencing Saturday, July 6, the "Peninsula Express," leaving Union Station 3:00 P. M., will connect through to Rehoboth, arriving at that point 8:02 P. M. Returning train will leave Rehoboth 7:18 A. M. week-days. This is in addition to connections of train now leaving Union Station at 6:25 A. M., arriving Rehoboth 12:27 P. M., and returning, leaving Rehoboth 2:50 P. M. week-days.

Summer Vacation Tours.

The Baltimore & Ohio Railroad Co. now has on sale at all its offices east of the Ohio river a full line of tourist excursion tickets to all the lake, mountain and seashore resorts in the Eastern and Northern States, and in Canada. These tickets are valid for return journey until October 31. Before deciding upon your summer outing it would be well to consult the B. & O. book of "Routes and Rates for Summer Tours." All B. & O. ticket agents at principal points have them, and they will be sent postpaid upon receipt of ten cents by Chas. O. Scull, general passenger agent, B. & O. R. R., Baltimore, Md.

Through Parlor-Car Line, Baltimore to Saratoga.

The Pennsylvania Railroad Co. has placed in service on its train leaving Union Station, Baltimore, 10:08 A. M. week-days, a through buffet parlor-car to Saratoga. At Jersey City car is attached to the "Saratoga & Catskill Mountain Limited" over the West Shore and Delaware & Hudson Railroads, arriving at Saratoga 9:15 P. M. Returning, car leaves Saratoga 8:25 A. M. This through car adds immensely to the facilities of travel between Baltimore and resorts on the Hudson, in the Catskill mountains and the famous Adirondacks region.

Plantation Machinery.

The official Louisiana Sugar and Rice Planters' Directory for 1895-6, published by Edwards & Morrison, 124 St. Charles street, New Orleans, La., is now in course of preparation for the press, and will appear about August 15. This directory will contain a complete list of cane and sugar factories in Texas, Florida and Louisiana; all sugar and rice planters' names, post-offices, shipping points, with capacity and character of sugar-houses, etc.; also a list of landings on Mississippi, Red and Ouachita rivers,

CONSTRUCTION DEPARTMENT.

THE MANUFACTURERS' RECORD

seeks to verify every item reported in its Construction Department by a full investigation and complete correspondence with everyone interested. But it is often impossible to do this before the item must be printed, or else lose its value as news. In such cases the statements are always made as "rumored" or "reported," and not as positive items of news. If our readers will note these points they will see the necessity of the discrimination, and they will avoid accepting as a certainty matters that we explicitly state are "reports" or "rumors" only. We are always glad to have our attention called to any errors that may occur.

*Means machinery, proposals or supplies are wanted, particulars of which will be found under the head of "Machinery Wanted."

In correspondence relating to matters reported in this paper, it will be of advantage to all concerned if it is stated that the information was gained from the MANUFACTURERS' RECORD.

ALABAMA.

Birmingham—Shop Improvements.—The North Birmingham Railway Co.'s repair plant is being improved. A new boiler and other machinery are being added by Superintendent Brown.

Birmingham—Mines.—Hon. T. H. Aldrich and others have formed a company to open a tract of 600 acres of mineral land leased from the University of Alabama.

Carbon Hill—Mining.—The McDonald Company has resumed its mining operations.

Corona—Coal-mining.—The coal-mining company is putting in electrical machinery to increase its capacity. W. H. Perrin is superintendent.

Decatur—Gold Mine.—The company which has bought the Block mines is the J. H. Helmer Gold Mining Co.

Eufaula—Cotton Mill.—It is reported that the Chewalla Cotton Mills Co. may enlarge its plant.

Farill—Mills.—It is reported that J. R. Ramsey is building a grist mill, a saw mill and a cotton mill.

Selma—Fire-alarm System.—The city may establish an electric fire-alarm system. Address the mayor.

Tuscaloosa—Cotton Mill.—Work has begun upon the new cotton mill which is to manufacture yarns exclusively.

ARKANSAS.

Hope—Delinting Plant.—The Hope Oil & Delinting Co. has been formed to operate a cotton-oil mill and delinting plant. F. B. T. Hollenberg is president at Little Rock, and W. V. Foster, of Hope, secretary.*

FLORIDA.

Gainesville—Preserving Plant.—Major J. O. Andrews will give information about proposed preserving and packing plant.

Georgetown—Canning Factory.—L. R. Babree and others have erected a canning factory for the canning of fruits and vegetables.

Jacksonville—Telephone System.—The city will put in a police telephone system and buy a patrol wagon. Address Mayor Bestwick.

Jacksonville—Medicine Company.—A company to manufacture patent medicines has been formed with G. W. Williams as president, and is to be known as the W. G. C. Medicine Co.

Kissimmee—Grist Mill.—L. D. Graham has completed the construction of his grist mill.

Norwalk—Moss Factory.—Thos. Hind has erected a moss cleaning and renovating establishment.

Palatka—Tobacco Company.—Articles of incorporation have been drawn up for the American Cigar & Tobacco Co.; capital stock \$300,000; capacity of factory 200,000 cigars per day. The directors are J. J. Dunn, Robert H. Partridge, Robert Bullock, Ocala; W. R. Young, Jacksonville.

Palatka—Grist Mill.—M. H. Dalton has established a grist mill.

St. Augustine—Bridge.—The Jacksonville, St. Augustine & Indian River Railway Co., it is stated, will build a bridge across Lake Worth

Address H. M. Flagler, at St. Augustine, president.

Tampa—Elevator.—Work has begun on the phosphate elevator which is to handle 250 tons of phosphate per hour. It will load a 2500 ton vessel in one day.

GEORGIA.

Athens—Cotton Mill.—The company intending to build a cotton mill is to be called the Electric Cotton Mill Co., and will have \$50,000 capital. It includes J. C. McMahon, B. Phinizy, G. T. Johnson and others.

Atlanta—Electric Supplies.—W. W. and Oscar C. Turner have organized a concern to deal in electric supplies and do electrical work.

Cleveland—Gold-extracting.—John Martin, the owner, has rebuilt and placed the Hamby gold-extracting mill in operation.

Gainesville—Stamp Mill.—John Martin is erecting a stamp mill.

La Fayette—Cotton-mill Addition.—The Union Cotton Mill Co. is adding eighty-four looms to its machinery instead of 208, as erroneously stated last week. It will have in all 748 spindles and 208 looms.

Marietta—Packing Plant.—John D. Cunningham has completed a fruit and vegetable-packing plant of 25,000 cans daily capacity.

New Bridge—Gold-mining.—J. H. Helmer, Decatur, Ga., and F. C. Mills, Cleveland, Ohio, are in a syndicate which will dredge the Chestatee river for gold.

Sautel—Stamp Mill.—It is reported that Charles Roberts may erect a stamp mill for gold-extracting.

Savannah—Sewerage System.—The city is considering a plan for sewerage proposed by Percy Sudgen, who may be addressed

LOUISIANA.

La Fayette—Sugar Mill.—W. R. Taylor is contractor for the sugar mill to be built by the La Fayette Sugar Manufacturing Co., of New Orleans. G. A. Breaux is president.

New Orleans—Cracker Factory.—The plant of B. Klots & Co. has been sold to the National Cracker Co. It will continue in operation.

New Orleans—Flour and Meal Mills.—A company may be organized to build several flour and meal mills. McCloskey Bros. may be addressed.

MARYLAND.

Baltimore—Shoe Company.—The R. Evitt Shoe Co. has been incorporated by Robert Evitt, Louis Coblenz, Charles Coblenz, Sidney Coblenz and Maurice J. Meyer with a capital stock of \$10,000.

Baltimore—Shoe Factory.—Clark, Colmar & Co. are erecting a four-story brick building for a warehouse and shoe factory. The machinery will be operated by a gas engine.

Baltimore—Ice Plant.—The Diamond Ice Co.'s plant has been completed and put in operation. A. F. Lawrence is president.

Baltimore—Packing-house.—The packing plant of the Martin Wagner Co. is to be removed to Curtis Bay, in the suburbs, where buildings have been erected.

Baltimore—Sugar Refinery.—Work on the Baltimore Sugar Refining Co.'s plant in the suburbs has begun. It will turn out 1500 barrels of sugar daily. Contracts have been let.

Baltimore—Water Works.—It is stated that the Chesapeake Electric & Water Co., of Canton, will erect a pumping plant with a 150,000 gallon standpipe to cost in all \$70,000, to include a filter also.

Baltimore—Hat Factory.—The Horner-Miller Straw Goods Co. has leased a six story brick building on German street for making straw hats.

Baltimore—Heating.—The Alva Hubbard Heating Co. has been incorporated by Alva Hubbard, W. S. Teville and others with \$5000 capital.

Baltimore—Lumber.—The West Falls Co. of Baltimore, for dealing in lumber, has been incorporated by Edward M. Brown, Lewis L. Clark, John E. Smith, William A. Casler, all of Baltimore, and Charles G. Corkran, of Baltimore county. The capital stock is \$5000.

Baltimore—Water Works.—German H. Hunt, David L. Bartlett and others have formed the Monterey Water Co. to furnish water to several resorts in the Blue Ridge mountains.

Hagerstown—Woolen Mill.—A \$50,000 woolen mill employing fifty hands may be located in Hagerstown. Samuel T. Miller, land agent of the Baltimore & Ohio Railway Co., is conducting the negotiations. His address is Baltimore.

Stevenson—Pipe Line.—It is reported that the Chattalane Springs Hotel Co. will construct a pipe line at a cost of \$50,000. Address Wm. L. Stork, president.

Williamsport—Stocking Factory.—It is reported that Henry Thompson will build a factory for making stockings which will employ 300 girls.

MISSISSIPPI.

Brookhaven—Electric-lighting.—The Brookhaven Manufacturing & Improvement Co. will erect a complete electric-light plant.*

Mississippi City—Fertilizer Works.—Work has begun on the Long Beach Fishing Co.'s fertilizer works. It will be operated by steam. A wharf 300 feet long is included.

Natchez—Oil Mill.—It is reported that a \$75,000 cotton-oil mill is to be erected at once by Joseph N. Carpenter and others.

Scooba—Tannery.—A. A. Hammock & Co. will build tannery; no machinery purchased as yet.

Stonewall—Cotton Mill.—The new mill to be built by the Stonewall Cotton Mill Co., it is stated, will have 10,000 spindles, also several hundred looms.

MISSOURI.

Hermann—Electric-lighting.—The town will vote on the question of putting in an electric-light system. Address the town clerk.

Kansas City—Packing-house.—It is reported that William J. and Robert Reid are interested in a company which may erect a provision packing-house.

Kansas City—Paper Factory.—Hans Hansen is erecting a \$50,000 plant for making brown paper. It is nearly completed.

St. Louis—Irrigating.—The American Irrigating Machine & Land Co. has been incorporated by Alexander Hogeland, E. P. Davis and others.

St. Louis—Lumber.—The A. C. McDonald Lumber Co. has been formed with \$35,000 capital.

St. Louis—Quarry Company.—The Grant Quarry Co. has been incorporated by Thomas J. Quinn, William Stalle and others.

St. Louis—Electric-lighting.—The city government is considering the building of an electric-light plant. Address the mayor.

St. Louis—Supply Company.—The Bowman-Long Office Supply Co. has been formed by W. H. Bowman and others with \$6000 capital.

NORTH CAROLINA.

Aberdeen—Bridge.—The Aberdeen & West End Railroad Co. will erect a 60-foot bridge on its line.

Charlotte—Gold Mine.—A syndicate of Northern people, it is reported, has purchased the Frazier gold mine, near Charlotte, and will sink shafts at once. Edward McDowell, of Charlotte, is to be manager.

Concord—Cotton Mill.—It is reported that the addition to the Cannon Manufacturing Co.'s plant is to contain 12,000 spindles and 400 looms.

Greensboro—Cotton Mill.—The Revolution Cotton Mill Co. has been incorporated by Rev. F. J. Murdoch, C. Cone, J. W. Scott and L. Banks Holt with \$200,000 capital to build a plant in or near the city.

Greensboro—Cotton Mill.—The Proximity Manufacturing Co. has been incorporated with \$200,000 capital to erect a mill. The directors are Rev. F. J. Murdoch, B. N. Duke, C. Cone, J. A. Odell and Frank Mebane.

Henrietta—Bridge.—A bridge is to be built across a stream 200 feet wide; will be used for vehicles and foot passengers. S. B. Tanner will receive bids for construction.

Lumberton—Cotton Mill.—The project to build a cotton mill has reached a point where most of the capital has been pledged in subscriptions. A company has been formed with B. Godwin, president; N. A. McLean, vice-president, and A. McAllister, secretary. A site has been secured for a factory.

Rutherfordton—Bridge.—The commissioners of Rutherford county want bids for constructing an iron bridge.

Salisbury—Cotton Mill.—N. B. McCauley, P. H. Thompson and others are organizing a company to build a \$60,000 spinning mill. About \$30,000 has been subscribed for stock.

SOUTH CAROLINA.

Charleston—Coal Chutes, etc.—The Consumers' Coal Co. is erecting a pier 332 feet long, with coal chutes and tracks for supplying vessels.

Charleston—Shoe Company.—J. B. Drake, S. F. Jones and others have formed the Drake-Innis-Green Shoe Co.; capital \$40,000.

Columbia—Cotton Mill.—The company which intends building the co-operative cotton mill is to be termed the Carolina Cotton Mills Co. E. W. Robertson is president, and I. L. Withers, secretary.

Florence—Water Works.—Proposals for constructing a water-works system, including six miles of pipe, will be received until July 31. (See advertisement elsewhere). System must include a 90-foot standpipe and 100 hydrants.

Florence—Brick-yards.—D. A. Layton is building a plant for making bricks near Florence.

Georgetown—Lumber Mill.—It is stated that Jacob Savage will erect a lumber mill for working cypress and pine lumber to have 60,000 feet daily capacity.

Greenwood—Knitting Mill.—It is reported that a company is about to establish a knitting mill and has bought a building for that purpose.

Lockhart—Cotton Mill.—It is reported that the company building the Lockhart Mills has decided to erect two more. C. D. Farrar is president.

TENNESSEE.

Bristol—Creamery.—A company with \$5250 capital has been organized to start a creamery. T. A. Gillespie and R. L. Hale are interested.

Chattanooga, Tenn.—Flour Mill.—The Shelton flour mill is about completed. It will have a capacity of 600 barrels of flour and 400 barrels of meal daily.

Knoxville—Cotton Mill.—It is reported that a \$100,000 company is being organized to erect another cotton mill, and that \$55,000 in stock has already been taken.

Knoxville—Cotton Mill.—The directors of the Brookside Cotton Mills have voted to increase capital from \$100,000 to \$400,000 to enlarge the plant. The mill is now operating 500 spindles and 176 looms. W. R. Tuttle is president.

Knoxville—Packing Plant.—The East Tennessee Packing Co. has awarded contract for refrigerating apparatus to cost \$15,000.

Knoxville—Electric-light Plant.—It is reported that the East Tennessee Telephone Co. may build a plant to furnish arc and incandescent lights for the city.

Knoxville—Telephone Exchange.—It is reported that the East Tennessee Telephone Co. may establish an exchange in Knoxville.

Memphis—Bridges.—The Shelby county court has decided to build several bridges. Address Squire J. P. Young.

TEXAS.

Cleburne—Compress.—It is reported that a site for a cotton compress has been purchased.

Dallas—Specialty Manufacturing.—The New Process Manufacturing Co. for making specialties has been formed with \$50,000 capital by C. E. Hooper, W. M. Robinson and others.

Elmendorf—Sewer pipe Factory.—Aaron French, of Pittsburg, Pa.; Nelson Mackey, of Elmendorf, and others are reported to have formed a company to build the sewer pipe and drain-tile factory to cost \$100,000.

Galveston—Opera-house Company.—M. Lasker, Leopold Weis and others have formed the Galveston Grand Opera-House Co. with \$100,000 capital.

Hearne—Water Works.—The city is considering the idea of securing a water-works system. Address the mayor.

Houston—Real Estate.—The Seabrook Improvement & Lot Co. has been chartered with \$60,000 capital by N. G. Kinnell and others.

Houston—Compress.—Bids are about to be let for the plant of the Standard Compress Co. J. L. Slayden is interested.

Houston—Telephone Exchange.—The telephone company to establish an exchange in Houston is the Texas Telegraph & Telephone Co. Address B. Kain.

Hubbard City—Lumber, etc.—The Hubbard City Lumber Co. has been organized to deal in lumber, doors, blinds, etc., at retail.

Jefferson—Plow Factory.—W. K. Henderson may establish a plow factory at Jefferson. He is considering the matter.

Laredo—Coal Mines.—It is reported that Thomas Carmichael, of New York, has bought the property of the Santa Tomas Coal Co. near Laredo. William Anderson is also interested.

Llano—Mill.—H. W. Finley has begun the erection of a stone grist mill.

Luling—Cotton Mill.—The proposed cotton mill, it is stated, will have 350 looms and cost \$100,000. It is to be operated by water-power. Address Otis McGaffey.

Marble Falls—Granite Company.—The Marble Falls Granite Co. has been incorporated with \$60,000 capital by John H. Barrett and others.

Marble Falls—Power Company.—The Marble Falls Land & Power Co. has been incorporated with \$100,000 capital by John H. Barrett and others.

Rockport—Telephone Company.—The Rockport Telephone Co. has been organized to establish an exchange. C. W. Booth is secretary.

San Antonio—Brick Works.—The San Antonio Pressed Brick Co. is being organized with \$50,000 capital.

San Antonio—Irrigation.—The Bexar Irrigation & Canal Co. has been formed by Edward True-

hart, C. K. Crawford and others with \$18,000 capital.

Taylor—Compress.—It is reported that the Bessemer Compress Co. is considering the erection of a compress at Taylor. J. M. Bill, engineer of the American company, may be addressed at Waco.

Texas City—Compress.—The project to establish a compress has been decided by a contract to erect it. It will be built for Thomas Cullyford and others.

VIRGINIA.

Alexandria—Stone Quarries.—The Fairfax Soapstone Co. has been organized with \$10,000 capital. W. H. Marbury is president, and Joseph Thornton, secretary.

Big Stone Gap—Coke Ovens.—It is reported that the Virginia Coal & Iron Co. will erect 500 coke ovens near Big Stone Gap.

Harrisonburg—Flour Mill.—W. P. Rondabush & Son are putting new machinery and elevators in their flour mill.

Newport News—Knitting Mill.—The Fowhatan Knitting & Hosiery Co. has been formed to operate the knitting mill, which will turn out 200 dozen garments daily at the start, increasing to 500 dozen. Carter M. Braxton is president; H. E. Parker, vice-president; Charles Shepard, secretary; Jas. M. Curtis, treasurer.*

Norfolk—Conduit System.—The Subway Company has asked permission of the city council to lay conduits for wires, etc., in the city. M. Willcox is present.

Richmond—Conduits.—The board of aldermen is considering the construction of an underground conduit system to cost between \$35,000 and \$50,000. Address the mayor.

Saltville—Paper Mill.—Geo. R. Sherman, of Providence, R. I., said to represent Northern capitalists, is prospecting with the view of building a paper mill near Saltville to use 18,000 cords of wood yearly.

WEST VIRGINIA.

Chester (not a post-office)—**Bridge.**—J. E. McDonald, of East Liverpool, Ohio, and William C. Jutte, of Pittsburgh, Pa., have organized the East Liverpool Bridge Co. to build across the Ohio river. The bridge will be a wire suspension structure 1200 feet long, with two towers erected on piers. The channel span is to be 700 feet. The bridge is to cost \$200,000. Address Wm. C. Jutte.

Shaw—Saw Mill.—The North Carolina White Lumber Co. will build a complete mill. Present address is Cumberland, Md.*

Wheeling—Bricks.—The Wheeling Brick Co., William Rome, president, has bought the Hunter brick plant and will operate it.

BURNED.

Abilene, Texas.—Bass Bros.' drug store; loss \$400.

Delhi, La.—The Richland Hotel.

Marion Station, Md.—Adon Davis's warehouse; loss \$7000.

Plain Dealing, La.—Cavill & Cavill's lumber plant; loss \$10,000.

Provencal, La.—M. W. Cerro's saw mill.

Sedalia, Mo.—Wagner Henry Shoe Co.'s store and Gentry & Cloney's store; loss \$60,000.

Washington, D. C.—The Y. M. C. A. Building; loss \$55,000.

Winston, N. C.—Jones & Cox's tobacco factory; loss \$25,000.

BUILDING NOTES.

Aberdeen, N. C.—Casino.—It is reported that James W. Tufts, of Boston, will erect a casino building in connection with the cottages he contemplates building near Aberdeen.

Alexandria, Va.—Church.—A site has been purchased for the proposed Baptist chapel. Address pastor of the First Baptist Church.

Anniston, Ala.—Block.—T. L. Houser and J. J. Willett will erect a two-story block for stores and offices.

Atlanta, Ga.—Clubhouse.—An exhibition building to cost \$12,000 will be erected of stone by the State of New York at the exposition. It will be used as a clubhouse after the exposition, and will be built with that end in view. Address President Collier, of the Exposition Company.

Atlanta, Ga.—Office Building.—William Austell, it is stated, will erect an office building to be ten stories high and fire-proof. Bruce & Morgan are the architects.

Atlanta, Ga.—Church.—The Christian congregation has decided to erect an edifice to cost \$50,000. Address Rev. C. P. Williamson, pastor.

Baltimore, Md.—Hotel.—The Poughkeepsie Improvement Co., it is reported, may erect a hotel on the western suburbs, near Gwynn Oak Park.

Baltimore, Md.—Hotel Addition.—Henry Smith & Sons have a contract for building a \$25,000 addition to the Hotel Bennett to contain thirty sleeping rooms. Baldwin & Pennington are architects.

Baltimore, Md.—Courthouse.—The contract for

erecting the courthouse has been awarded to John Gill & Sons, of Cleveland, Ohio, for \$1,849,000. The materials will be of Beaver Dam marble and Woodstock granite. Wyatt & Nolting are architects.

Baltimore, Md.—Park Improvements.—Additions and improvements are to be made to the Carroll Park mansion-house. J. Evans Sperry is architect.

Baltimore, Md.—Dwellings.—E. B. Hunting & Co. will erect three brick and stone residences on Cathedral street.

Baltimore, Md.—Dwellings.—It is reported that J. W. Sindall will erect five houses on property he has purchased on North Charles street.

Baltimore, Md.—Dwellings.—The Baltimore Ground Rent Co., Frank Bolgiano president, will build several residences on Park avenue.

Baltimore, Md.—School.—An addition to school No. 16 to cost \$19,000 is to be made. Address Hon. F. C. Latrobe, mayor.

Bay City, Texas—Church.—The Methodist congregation will erect a new edifice. Address the pastor.

Charleston, W. Va.—Temple.—It is stated that the Willow Lumber Co., of Clifton Forge, Va., will erect the Masonic temple.

Dallas, Texas—Temple.—Hella Temple is considering the idea of constructing a \$150,000 building. W. W. Manning and A. V. Lane are interested.

Ellicott City, Md.—Church.—The Catholics contemplate building a church and have purchased a site near Ellicott City.

Eufaula, Ala.—Church.—The Primitive Baptist Church congregation is preparing to build a church. Address the pastor.

Fort Worth, Texas—Depot.—A meeting has been held of railroad officials and citizens to decide upon plans for a union depot. Address Hon. B. B. Paddock, mayor.

Goliad, Texas—Bank.—It is reported that Louis Metze will erect a building for a bank and stores.

Greensboro, Ala.—Church.—The Baptist congregation has raised a fund to build a church to cost \$6000. Address Rev. A. R. Hardie, pastor.

Greenwood, S. C.—Block.—I. W. Green will erect a business block.

Higginsville, Mo.—Opera-House.—A project is on foot to convert a hotel into an opera house. Address the mayor.

Houston, Texas—Hotel.—O. H. Rudessill & Son are architects for the hotel which is to cost \$25,000. An elevator may be put in.

Huntington, W. Va.—Courthouse.—Plans have been accepted for the \$100,000 courthouse. Address the county court.

Hyattsville, Md.—Temple.—Appleton B. Clark is architect for the Masonic Temple, which is to cost \$7000.

Jacksonville, Fla.—Temple.—The proposed Pythian temple will be three stories high, with stores in first story, and cost \$20,000; no plans prepared. Address H. H. Richardson, chairman of committee.

Jacksonville, Fla.—Block.—It is reported that Emory Bros. will erect a two-story stone building, also four dwellings, at once.

Jacksonville, Fla.—Bridge.—The city may build a bridge to contain a draw over the St. John's river. Address the mayor.

Jacksonville, Fla.—Business Block.—C. C. Robertson will give information relative to the business block the Metropolitan Building Co. intends erecting.

Jacksonville, Fla.—Hotel Addition.—Washington Van Hamm will build an addition to the Windsor Hotel. Electric lights and other improvements may be put in.

Knoxville, Tenn.—Theatre.—Plans are being submitted for the proposed theatre, which is to be built by a \$60,000 company. It will have stores on the ground floor and offices above. Address Hon. M. L. Ross.

La Plata, Md.—Courthouse.—Contracts are about to be let for the Charles County courthouse. Address A. J. Smoot, chairman of the committee.

Louisville, Ky.—Depot.—The Louisville & Jeffersonville RR Co. will erect a brick depot 524 by 130 feet to cost \$80,000.

Louisville, Ky.—Engine-houses.—The city invites plans from architects until August 1 for three fire engine-houses not to exceed \$4000 in cost each; one is to be a police station and engine house combined. Address chairman of the board of safety.

Louisville, Ky.—Gymnasium.—The Young Men's Hebrew Association will erect a three-story addition to its gymnasium.

Louisville, Ky.—Residence.—William Higgins will erect a dwelling to cost \$8400.

Louisville, Ky.—Warehouse.—Theophilus Conrad will build a five-story brick storehouse 100 by 377 feet to cost \$13,500.

Mexia, Texas—City Hall.—The proposed city hall will cost \$7000. Plans have been prepared by R. H. Stecke, architect. Bids for construction are wanted.

Mobile, Ala.—Elevator, Wharves, etc.—It is reported that the Mobile Jackson & Kansas City

Railroad Co. is about to build 200 feet of wharf-front, a grain elevator of 250,000 bushels capacity, a coal dock of 10,000 tons capacity and a lumber boom to contain an area of ten acres. H. Austill is promoting the enterprise.

New Orleans, La.—Asylum.—A. Einsiedel, architect, has prepared plans for the Mount Carmel Female Orphan Asylum. Funds are being raised to build it.

New Orleans, La.—Carhouse.—The St. Charles Street Railroad Co. will erect a building for a warehouse and storing cars to cost \$25,000.

New Orleans, La.—Warehouse.—The American Sugar Refining Co. will erect a brick warehouse to cost \$3000.

Norfolk, Va.—School.—John B. Whitehead, chairman, will receive bids until August 1 for building an addition to the N. Folk High School.

Norfolk, Va.—Warehouses, Piers and Docks.—The warehouses, piers and docks to be constructed at Pinner's Point are to be of the following dimensions: One pier 76x400 feet, one 88x400 feet, two warehouses each 60x400 feet, and one 72x400 feet. Bids will be received until August 3 also for 235,000 cubic yards of dredging. Address G. M. Serpell.

Owensboro, Ky.—Hall.—Work is about to begin on a \$30,000 hall building for the Y. M. C. A. Address the secretary.

Oxford, N. C.—Asylum.—An addition to the Oxford Orphan Asylum to cost \$10,000 is to be made. Address the board of trustees.

Portsmouth, Va.—Warehouses, etc.—It is stated that the Norfolk & Carolina Railway Co. is ready to receive bids for two large warehouses, also several wharves at Pinner's Point. Address G. M. Serpell.

Richmond, Va.—School.—The city council has appropriated \$15,000 for a new school building. Address J. Taylor Elliston, president school board.

Richmond, Va.—Clubhouse.—It is reported that the Lakeside Bicycle Club will have a clubhouse erected. E. D. T. Myers, Jr., may be addressed.

Rome, Ga.—Postoffice.—Martin Aiken, supervising architect, Washington, D. C., will receive bids until August 9 for heating and ventilation systems for the postoffice building at Rome.

Rome, Ga.—Church.—St. Peter's Episcopal Church is to be completed at once. Address A. W. Walton, chairman of building committee.

Savannah, Ga.—Postoffice.—It is understood that contractors will be asked to bid on the United States postoffice in a short time, as plans are nearly completed. Address the supervising architect, Washington, D. C.

Savannah, Ga.—Telephone Block.—Architect Eichberg has prepared plans for the building of the Southern Bell Telephone Co. It is to cost \$25,000 and be fire-proof. Address the company.

Spartanburg, S. C.—Episcopal Church.—It has decided to build an edifice to cost \$800. Address the rector.

St. Augustine, Fla.—Clubhouse.—It is proposed to erect a clubhouse. Address John Henry, secretary.

Thomasville, Ga.—Temple.—Jason S. Bailey, of Boston, Mass., it is stated, will erect a winter residence to cost \$20,000.

Tuskegee, Ala.—Warehouse.—The Farmers' Alliance warehouse, recently burned, is to be rebuilt. Address C. W. Thompson.

Victoria, Texas—Dwelling.—J. J. Welder will erect a dwelling to cost \$45,000.

Waco, Texas—Exposition Building.—The Cotton Palace Co. has determined to erect a building of brick with steel interior work to cost \$35,000. Address R. B. Parrott.

Washington, D. C.—Dwelling.—Dr. F. C. Marcy will erect a dwelling to cost \$10,000.

Washington, D. C.—Dwellings.—Permits for residences have been issued as follows: George C. Bloomer, one block to cost \$14,000; George Klenk, one block, \$8000.

Washington, D. C.—Dwelling.—T. E. Mussey will erect a brick and stone dwelling to cost \$10,000.

RAILROAD CONSTRUCTION.

Railroads.

Alexandria, La.—Chief Engineer Philbrick confirms the report in a letter to the MANUFACTURERS' RECORD that the Kansas City, Watkins & Gulf Company has surveyed an extension from Alexandria to Natchez, sixty-five miles, and states that the road will probably be built. J. B. Watkins, at Lake Charles, is president.

Blacksburg, S. C.—Supt. A. Tripp, of the Ohio River & Charleston Company, advises the MANUFACTURERS' RECORD that the proposed branch referred to last week will be four miles long if built.

Brooksville, Ky.—Y. Alexander advises the MANUFACTURERS' RECORD that a company is being formed to build the line from Brooksville to Wellsburg.

Chattanooga, Tenn.—President J. T. Crass, of the Lookout Mountain & Lulu Lake Railway Co.,

advises the MANUFACTURERS' RECORD that track-laying is about to begin. Work has commenced on the power-house.

Crowley, La.—Surveys have been completed for the Louisiana Central from Crowley to Abbeville and Southwest Pass. The road will traverse the parishes of Acadia, St. Landry and Vermilion. G. B. Jones is engineer.

Dahlonega, Ga.—It is reported that the arrangements have been completed for building the proposed railroad line from Dahlonega to connect with the Southern system at Lula or Gainesville. George J. Baldwin, of the Chestnut Pyrites Co., is interested.

El Dorado, Ark.—Jesse B. Moore, of the Timber Belt & Commercial Railroad Co., writes the MANUFACTURERS' RECORD that the line to be built at present will be about thirty miles long, to traverse a coal and timber country.*

Fort Meade, Fla.—It is reported that the Plant Railway & Steamship Co. is considering a 20-mile extension of its road from Fort Meade to Avon Park. Address the chief engineer at Savannah, Ga.

Fort Smith, Ark.—The St. Louis, Siloam & Southern Railway Co. has increased its capital to \$6,450,000. Surveys are now being made in Baxter county. H. D. Mackey, of St. Louis, is one of the company, also Hon. W. M. Fishback.

German, Texas.—The Texas Central Railroad Co. is considering the building of a branch from German to Sipe Springs to accommodate cotton shippers.

Key West, Fla.—A committee of ten business men has been appointed to promote a railroad line along the Florida keys between Biscayne bay and Key West, and will endeavor to secure an issue of \$500,000 in bonds to be used for this project. The committee will endeavor to have the Flagler system extended to Key West. Among those interested are Jeremiah Fogarty, chairman, and J. V. Harris, secretary of the committee.

Louisville, Ky.—The Louisville & Nashville Railroad road has awarded the contract to Joseph Coyne, of Louisville, for the grading of the extension of the cut-off line between Shelbyville and Christiansburg. The work will cost \$75,000.

Mobile, Ala.—A force of men are grading the route of the proposed Mobile, Jackson & Kansas City line between Mobile and the proposed tide-water terminus at Choctaw Point. H. Austill is president.

Morehead, Ky.—It is reported that the railway enterprise to connect the Morgan county timber lands with Morehead is to be carried out at once, and that Reynolds & Co., of New York, are interested.

New Orleans, La.—J. C. Andrews is reported to have secured work of building nine miles of the New Orleans & Western road and has begun grading. Work has also begun on the terminal property of the road at Battleground plantation. A. W. Swanitz, 135 Carondelet street, is chief engineer.

Oliver, Tenn.—Surveys have been made for a railroad line five miles long from Donovan Gap to the Cumberland mountain coal mines. The road will be built by the Anderson County Mining & Manufacturing Co. W. A. Gage is chief engineer. The total length of the line will be about seventeen miles.

Pensacola, Fla.—S. N. Von Praag, president of the Florida Northwestern Company, advises the MANUFACTURERS' RECORD that his company is ready to receive bids for grading twenty-five miles of the road. His address is Memphis, Tenn., care Arlington Hotel.

Savannah, Ga.—Receiver John R. Young has received permission to issue \$30,000 in certificates to build an extension of the Macon & Atlantic to connect with some other system. About forty miles of the line have been completed.

Tuscumbia, Ala.—The extension of the Louisville & Nashville from Sheffield to Tuscumbia will be three miles long. Davis & Root, of Atlanta, are grading the line. The railroad company will furnish material.

Victoria, Texas.—The Pan-American Railroad project is to be revived at a meeting to be held in Victoria on August 22. It is reported that J. S. Anthony, of Boston, president of the company, has enlisted outside capital in the enterprise.

Weatherford, Texas.—The business men are organizing a company to promote the extension of the Chicago, Rock Island & Texas system from Bridgeport, in Wise county, to Weatherford.

Westlake, La.—Citizens of Westlake are raising a fund to have the Gulf & Interstate road extended from Beaumont to that city. W. B. Norris is interested.

of the Baltimore City Passenger Railway system is to be rebuilt for a trolley line. Contracts have been awarded. Walter S. Franklin is president.

Baltimore, Md.—The Columbia & Maryland Electric Railway Co. is receiving bids for constructing the double track electric road between Baltimore and Washington. T. M. Lanahan is president. The company's offices are in the Rialto Building.

Birmingham, Ala.—The Birmingham Railway & Electric Co. advises the MANUFACTURERS' RECORD that between thirty nine and forty four miles in all of its lines will be rebuilt for electric motors. The power-house is now being built.

Bridgewater, Va.—The MANUFACTURERS' RECORD is informed that Edward P. Wilson and others, of Philadelphia, are interested in the scheme to build an electric railroad between Basic City and Bridgewater. If built it will connect with the Chesapeake & Western now under construction.

Brunswick, Ga.—W. A. Jeter and A. H. Lane are considering extensions to the Brunswick street railroad, and have asked for a franchise. The road is to be changed to an electric system.

Chattanooga, Tenn.—The Chattanooga Electric Railway Co. is considering an extension of its line to Rossville, Ga. S. W. Divine is receiver.

Hearne, Texas.—R. P. Duncan and others may build an electric street railroad in the suburbs.

Hillsboro, Texas.—The Hillsboro Street Railway Co. has elected J. H. Graham, of Boston, president; H. W. Carter, of Hillsboro, vice president, and J. T. Voss, of Atlanta, superintendent. The company, it is stated, intends building a trolley line at once and placing two motor cars upon it.

Mexia, Texas.—A company is being organized to build an electric railway. Address W. L. Hall.

New Orleans, La.—The Chalmette Railroad Co. has organized with Henry T. Beauregard, president; R. V. Dueros, vice president, and J. D. St. Alexandre, secretary, to build a six-mile electric line in St. Bernard parish.

Richmond, Va.—The Richmond Railway & Electric Co. is considering an extension of its system along Broad and other streets. Andrew Pizzini may be addressed.

Richmond, Va.—The Richmond Railway & Electric Co.'s extension will be one and a-half miles of trolley line, doable track.*

Sanford, Fla.—The stockholders of the Jacksonville & Tampa Bay Improved Railway Co. have elected Crosby Thompson, of Cleveland, Ohio, president; E. M. Hammond, Orlando, Fla., vice-president; T. J. Appleyard of Sanford, general manager. This is to be an electric line between the points named.

St. Augustine, Fla.—George H. Packwood, T. J. Appleyard, of Tallahassee, and others are interested in constructing an electric road in the suburbs. Mr. Packwood may be addressed care Ocean View Hotel.

Washington, D. C.—It is reported that Washington parties have taken up the project to build an electric railroad between Washington and Gettysburg, and will organize company to begin construction work. The road will be seventy five miles long. Hon. Frank Brown, president of the Traction Company, at Baltimore, is interested. Particulars can be obtained from Alexander D. Anderson, Glover Building, Washington, D. C.

Westminster, Md.—It is reported that a Chicago syndicate will take up the electric project from Baltimore to Gettysburg, and form a \$750,000 stock company to complete it.

Machinery, Proposals and Supplies Wanted.

Manufacturers and others in need of machinery of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery needed we will make their wants known free of cost, and in this way secure the attention of machinery manufacturers throughout the country. The MANUFACTURERS' RECORD has received during the week the following particulars as to machinery that is wanted.

Baking-powder Cans.—The Southern Soda Works, Nashville Tenn., wishes to contract with some firm to supply it with baking-powder cans. Fred. T. Cummins is manager.

Boiler.—X 757, Sun Office, Baltimore, Md., wishes a twenty-horse power vertical boiler; state price.

Boiler.—R 197, Sun Office, Baltimore, Md., will buy a ten to twenty horse power boiler.

Boilers.—The Hope Oil & Delinting Co., Hope, Ark., will buy one or more boilers for cotton-oil mill and delinting plant.

Button-hole Machines.—The Vendig Bros. Sh't Co., Dallas, Texas, will buy button-hole machines

Drill.—H. A. Stopple & Co., Houston, Texas, want to buy a 24-inch drill for metal work.

Electric Lighting.—The Brookhaven Manufacturing & Improvement Co., Brookhaven, Miss., will purchase a complete plant for supplying circuit of ten arc and 300 incandescent lamps, except power-house and boiler.

Electric Railway.—The Richmond Railway & Electric Co. is in the market for one and one-half miles of double track and overhead equipment for trolley electric road. Address A. Pizzini, Jr., 909 Bank street, Richmond, Va.

Engine.—The Hope Oil & Delinting Co., Hope, Ark., will buy one or more engines for cotton oil mill and delinting plant.

Gas Engine, etc.—D. A. Frick, Rock, N. C., is in the market for one gas engine and one threshing machine.

Gold Extracting.—Charles H. Davis, Petersburg, Va., is in the market for one to stamp mill for working on free-milling ore; also a larger plant for working sulphide ores for the Triple Lead Gold Mining Co.

Key Seater.—R. H. Hanley, Palatka, Fla., wants a key-seating machine.

Knitting Machinery.—The Powhatan Knitting & Hosiery Co. is in the market for knitting and hosiery machines to produce 200 to 300 dozen garments daily. Address Carter M. Braxton, president, Newport News, Va.

Lathe.—H. A. Stopple & Co., Houston, Texas, want to buy a lathe twenty inches by six feet in dimension.

Lathes.—R. H. Hanley, Palatka, Fla., will buy one 28 inch swing lathe, 10 foot bed; also one 16-inch swing lathe, same bed.

Linting Machinery.—The Hope Oil & Delinting Co., Hope, Ark., is in the market for machinery for delinting cottonseed.

Moss-working Machinery.—C. H. Preston, Crescent City, Fla., is in the market for moss-working machinery.

Planer.—H. A. Stopple & Co., Houston, Texas, will buy a planer 24x24x6 in dimensions.

Planer and Drill Press.—R. H. Hanley, Palatka, Fla., wants a 30-inch planer, eight-foot bed, and a 30-inch drill press with finishing back gear.

Pump.—The city council of Victoria, Texas, will purchase a steam pump for the water works system. Address the mayor.

Rails.—Allen Bros. & Wadley, Allentown, La., are in the market for three miles of 35 pound steel rails.

Rails.—J. J. Whisnant, Blacksburg, S. C., is in the market for about ten miles of 16-pound iron tram rails.

Saw Mill.—The N. C. White Lumber Co., Cumberland, Md., will buy complete machinery equipment for saw mill.

Stone Cutters.—The Readland Stone Co., Elkins, W. Va., desires to purchase a set of saws with teeth for cutting stone; also a planer.

Wagon-making Machinery.—J. B. Kelly, Sanford, N. C., will purchase machinery for vehicle manufacturing, at least \$2000 worth.

Water Motors.—The Spartanburg Machinery Co., Spartanburg, S. C., wishes a two horse-power water motor for a water pressure of about forty pounds.

Water-wheels.—Charles T. Westcott, Chestertown, Md., wants a turbine or other style of power wheel, with shafting, pulleys, etc.

Well Drill.—Dr. M. M. Malcolm, Fayetteville, W. Va., wishes to buy a new well drilling machine complete.

Wind-mills, Piping, etc.—The Farmers & Merchants' Oil Co., of Greenville, Texas, desires to correspond with makers of wind-mills and piping

Woodworking, etc.—J. B. Mathews, Sanford, N. C., is in the market for machinery for making coffins and trunks.

A. H. Kohn desires to correspond with parties supplying machinery for broom-making. Address until August 1 at Greenville, S. C.

Edwin D. Steele, High Point, N. C., desires to correspond with makers of knitting machinery for hosiery; also machinery for back bands and window cords.

G. H. Peacock, Selma, Ala., wants prices on steam pump, with pipe, etc., complete for raising water from a 200 foot artesian well and forcing it into cistern ten feet from well.

H. W. Sherman, Neosho, Mo., wishes to correspond with makers of barrels and cooperage material.

R. S. Gray, 206 North Tryon street, Charlotte, N. C., wishes to correspond with makers of machinery for putting up baking powder; also for preparing laundry blueing in powder and lumps.

The Timber Bat & Commercial Railway Co., El Dorado, Ark., wishes quotations on 56 and 35-ton steel rails and 22 and 26 ton locomotives. (Expect to build thirty miles of line.) Address Jesse B. Moore as above.

Thos. Taylor, Jr., Orangeburg, S. C., desires information relative to machinery for making and refining peanut oil.

W. F. Penniman, Brunswick, Ga., desires to

correspond with manufacturers of evaporating apparatus for fruits.

E. V. Zoeller, secretary Farmers' Oil Mills, Tarboro, N. C., wishes to correspond with manufacturers of chilled-steel crushing rolls.

The Fork Ridge Coal Co., at Middleborough, Ky., desires to correspond with makers of fans for ventilating coal mines. Address Thomas Atkinson, manager.

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PROPOSALS FOR THE CONSTRUCTION OF SIX LIGHT-DRAFT COMPOSITE GUNBOATS FOR THE UNITED STATES NAVY.	
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Navy Department, Washington, D. C., July 23, 1895.—Under authority conferred by the act of Congress making appropriations for the naval service, approved March 2, 1895, sealed proposals are hereby invited and will be received at this Department until 12 o'clock noon on

Tuesday, the 1st day of October, 1895, at which time and place they will be opened in the presence of attending bidders for the construction, exclusive of armament, and including equipment as specified by contract, of six light draft composite gunboats of about one thousand tons displacement each, which vessels are, for the purposes of this advertisement, designated as Gunboats Nos. 10, 11, 12, 13, 14, and 15. Said vessels are to be constructed in accordance with the requirements of the aforesaid act of March 2, 1895, viz.: That "In the construction of all said vessels all of the provisions of the act of August third, eighteen hundred and eighty six, entitled 'An act to increase the naval establishment,' as to materials for said vessels, their engines, boilers, and machinery, the contracts under which they are built, except as to premiums, which are not to be offered, the notice of any proposal for the same, the plans, drawings and specifications therefor, and the method of executing said contracts, shall be observed and followed, and said vessels shall be built in compliance with the terms of said act, save that in all their parts said vessels shall be of domestic manufacture."

The contracts for the construction of said gunboats will contain provisions to the effect that the contractor guarantees that when completed and tested for speed, under conditions to be prescribed by the Navy Department, the speed developed by the vessels upon such trial shall be not less than an average of 12 knots an hour, maintained successfully for four con-
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[July 26, 1895]

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	Armstrong, Robt. S., & Bro.....	22	Commercial Wood & Cement Co.....	6	Moore Mfg. & Foundry Co.....	40	Smith & Thompson.....	6	
	Artesian Well Drilling Co.....	32	Consolidated Roofing Works.....	*	Morey, J. D.....	21	Smith's Sons Gin & Machine Co.....	34	
	Asbrand, C. W.....	26	Corbett Mill & Machine Co.....	26	Morris, Tasker & Co.....	39	Southern Elec. Mfg. & Supply Co.....	38	
	Atkins, E. C., & Co.....	28	Cordesman, Meyer & Co.....	28	Morse, Williams & Co.....	38	Southern Iron & Equipment Co.....	23	
	Atkins, Jos. L.....	37	Cortright Metal Roofing Co.....	*	Moyes, L. M.....	14	Southern Log Cart & Supply Co.....	*	
	Atlanta Loan & Investment Co.....	21	Covert Mfg. Co.....	27	Mudford Mfg. Co.....	34	Southern Lumber Directory.....	25	
	Atlanta Supply Co.....	11	Covington, John I.....	*	Mueller, H., Mfg. Co.....	33	Southern Pacific Co.....	37	
	Atlanta Terra Cotta Co.....	6	Cox, Justice, Jr.....	23	Mundt & Sons.....	17	Southern Railway Co.....	37	
	Austin, F. C., Mfg. Co.....	19	Crews & Westbrooks.....	*	Murphy, John, & Co.....	10	Southern Saw Works.....	29	
	Automatic Water Tank Co.....	20	Crompton Loom Works.....	34	Murphy & Bruning.....	38	Southern Telephone Co.....	39	
B	Babcock & Wilcox Co.....	15	Cronk Hanger Co.....	*	Murray, Dougl & Co., Ltd.....	4	Southern Terra-Cotta Works.....	6	
	Bailey-Lebby Co.....	19	Crouch, Geo. S., Secretary.....	*	Murray, James & Son.....	19	Southern Water Supply Co.....	21	
	Baldwin Locomotive Works.....	13	Cummer, F. D., & Son Co.....	17	Spence, L., & Son.....	15	Springfield Machine Tool Co.....	12	
	Baltimore Engraving Co.....	31	Curtis & Marble.....	35	National Pipe Bending Co.....	9	Sprinkle Pulley & Woodenware Co.....	12	
	Baltimore Storage & Light Co.....	36	Cutler Mfg. Co.....	11	National Wringer Co.....	*	Sprout, Waldron & Co.....	8	
	Bangor Foundry & Engine Works.....	4	Cypress Tank Co.....	33	National Water-Proof Fibre Co.....	24	Standard Dry-Kiln Co.....	29	
	Barclay, W. H.....	22	D	Dallett & Co.....	23	N. J. Car Spring & Rubber Co.....	11	Standard Electric Co.....	39
	Barnard & Hoopes.....	38	Daugherty Typewriter Co.....	21	N. J. Car Storage & Repair Co.....	23	Standard Paint Co.....	39	
	Barnes, W. F. & John, Co.....	12	Davis, G. M., & Son.....	*	Newport News Shipbuilding & Dry Dock Co.....	*	Standard Tool Co.....	27	
	Barrett, S. E., Mfg. Co.....	27	Davis, L. W.....	38	New York Belt'g & Pack'g Co., Ltd.....	13	Starr, B. F., & Co.....	26	
	Barrett, Thos., Jr., President.....	23	Davis-Farrar Co.....	33	New York Equipment Co.....	23	Stebbins, Wallace.....	13	
	Bartl, Edmund A.....	6	Davis Foundry and Mch. Works...*	*	New York Machinery Depot.....	23	Stedman's Fdry. & Mch. Works.....	19	
	Bates, Jas.....	9	Davis, Kelly & Co.....	23	New York, Mobile & Mex. S. S. Co.....	36	Steel Cable Engineering Co.....	2	
	Battle Creek Steam Pump Co.....	40	Dayton Gas & Gasoline Engine Co.....	16	New York & New England R. R.	37	Steel Rail Supply Co.....	23	
	Bay Line.....	36	Dean Bros. Steam Pump Works....	32	Harris, N. W., & Co.....	21	Stender, William L.....	33	
	Beach, H. L.....	*	De Este & Seeley Co.....	9	Hartford Steam Boiler Inspection & Insurance Co.....	31	Stephens & Stephens Mfg. Co.....	27	
	Beckley, A. J., & Co.....	17	De Kalb, Courtenay.....	6	Hauptman, Leon F.....	24	Stepto, J., & Co.....	23	
	Belden Machine Co.....	8	De Loach Mill Mfg. Co.....	35	Hausburg, E. O.....	18	Stevens', H., Sons Co.....	40	
	Berlin Machine Works.....	29	Deming Co.....	12	Heflernan, Wm. A.....	26	Stevenson & Co.....	10	
	Bertlette, C., & Co.....	23	Denis & Lance.....	6	Help Wanted.....	8	Stewart, Jas., & Co.....	6	
	Bertsch & Co.....	26	Detroit & Cleveland Line.....	36	Hench & Dromgold.....	29	Stilwell-Bierce & Smith-Vale Cr.	32, 33	
	Besly, Chas. H., & Co.....	40	Diamond Machine Co.....	9	Hendrer, A. L.....	4	Stirling Company.....	40	
	Bethlehem Iron Co.....	*	Diffenderfer, J. K. E.....	6	Herrick Mfg. Co., Limited.....	*	St. Louis Foundry Supply Co.....	9	
	Big Four Route.....	37	Disston, Henry, & Sons.....	*	Hewitt, F. R.....	36	Stow Flexible Shaft Co., Ltd.....	9	
	Bird, Wm. M., & Co.....	6	Dixon, Jos., Crucible Co.....	40	Hickman, Williams & Co.....	23	Stow Mfg. Co.....	10	
	Birmingham Boiler Works.....	15	Doig, Wm. S.....	*	Hiertz, Theo., & Son.....	13	Stromberg-Carlson Tel. Mfg. Co.....	39	
	Blacker, M. M.....	26	Dopp, H. Wm., & Son.....	20	Hill, Nicholas S., Jr.....	6	Sturtevant, B. F., Co.....	35	
	Blakeslee Mfg. Co.....	32	Dowire Works Co.....	10	Hirsch, L. K.....	23	Sturtevant Mill Co.....	18, 26	
	Block-Pollak Iron Co.....	24	Dowden Mfg. Co.....	31	Hollingsworth, Wm.....	16	Sullivan Machinery Co.....	17	
	Bolles, J. E., & Co.....	20	Draper, Geo., & Sons.....	20	Holmes, E. & E., Machinery Co.....	29	Supply Manufacturing Co.....	38	
	Boomer & Boschart Press Co.....	21	Draper Machine Tool Co.....	12	Holmes, Thos. H.....	29	Suter-Linder Pulley Co.....	12	
	Boston Belting Co.....	11	Dufur & Co.....	10	Hook, Chas. C.....	6	Sutton, H. H.....	22	
	Bostwick Fire-Proof Steel Lath Co.....	27	Dunning, W. D.....	21	Hooper, Townsend Co.....	13			
	Bradley Pulverizer Co.....	18	Duson, W. W., & Bro.....	36	Hooven, Owens & Rentschler Co.....	14			
	Bradstreet Co.....	21	Duval, J. E.....	35	Howard Bros. Mfg. Co.....	34			
	Brooks, T. H., & Co.....	26	E	Huber, Will.....	22	I	Ober Lathe Co.....	29	
	Brown, A. & F.....	12	Eagle Boiler Works.....	15	Illinois Central Railroad Co.....	36	P	Old Dominion Elec. Cons. Co.....	38
	Brown & Garber.....	6	East Coast Mfg. Co.....	26	India Alkali Works.....	34	Palmer, E. K., & Co.....	36	
	Brown & King Supply Co.....	35	Easton & Burnham Machine Co.....	35	Indiana Machine Works.....	29	Pancoast, Henry B., & Co.....	13	
	Brown Bros. Mfg. Co.....	31	Eccles, S. Jr.....	24	Ingersoll-Sergeant Drill Co.....	29	Partridge, Daniel.....	22	
	Brown Electric & Machinery Co.....	39	Eisenbrandt Cycle Co.....	24	International Corres. Schools.....	6	Paul, Thos. H., & Son.....	16	
	Brown Hoisting & Con. Mch. Co.....	20	Electric Heat Alarm Co.....	2	J	Paxson, J. W., & Co.....	9		
	Buckeye Iron and Brass Works ...	35	Electric Publishing Co.....	21	Jackson, J. F. B.....	22	Peacock, George.....	4	
	Buckeye Mfg. Co.....	9	Electric Storage Battery Co.....	*	Jameson, W. D., & Co.....	39	Peck-Smead Co.....	10	
	Buffalo Forge Co.....	40	Ellicot Machine Co.....	12	Jarden Brick Co.....	24	Pen Argyl Iron Works.....	4	
	Burnham Bros.....	33	Empire Glass & Decoration Co.....	26	Jeffrey Mfg. Co.....	20	Penberthy Injector Co.....	40	
	Burrowes, E. T., Co.....	9	Empire Paint & Roofing Co.....	*	Jenkins Bros.....	17	Pennsylvania Machine Co., Ltd.....	23	
	Burt Manufacturing Co.....	10	Enquist, John.....	6	Jenks & Cochran.....	25	Petersburg Iron Works Co.....	16	
	Bushnell, G. H., Press Co.....	35	Entwistle, T. C.....	34	Johns, H. W., Mfg. Co.....	21	Pettee Machine Works.....	35	
	Byers, Jno. F., Machine Co.....	4	Epping, Carpenter & Co., Ltd.....	9	Joseph, Jos., & Bros.....	24	Philadelphia Env. Works, Ltd.....	*	
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	C. & B. Line.....	36	Esty Sprinkler Co.....	4	Phila. Textile Machinery Co.....	34	Phila. Textile Machinery Co.....	34	
	Caldwell, H. W., & Son Co.....	2	Evans Gas Engine Co.....	16	Pike, George.....	4	Phoenix Iron Works Co.....	4	
	Caldwell Land & Lumber Co.....	24	Empire Paint & Roofing Co.....	*	Pickrell, Percy A.....	21	Pierce Engine Co.....	*	
	Callahan & Lewis Mfg. Co., Ltd.....	33	Enquist, John.....	6	Pittsburg Boiler Scale Resolvent Co.....	*	Pittsburg Boiler Scale Resolvent Co.....	*	
	Camden Steel Roofing & Cor. Co.....	27	Entwistle, T. C.....	34	Pittsburg Locomotive Works.....	*	Pittsburg Telephone Co.....	39	
	Cameron, A. S., Steam Pump Wks.....	32	Eppings, Carpenter & Co., Ltd.....	9	Place, George, Machine Co.....	23	Place, George, Machine Co.....	23	
	Cameron & Barkley Co.....	19	Erwin Hydraulic Machinery Co.....	33	Poage, Alex.....	36	Trenton Iron Co.....	11	
	Campbell & Zell Co.....	15	Link-Belt Engineering Co.....	4	Pomona Terra Cotta Co.....	6	Trevor Mfg. Co.....	28	
	Canby, Edward T.....	23	Lodge & Davis Machine Tool Co.....	22	Porter, H. K., & Co.....	13	Tripod Paint Co.....	27	
	Canton Steel Roofing Co.....	27	Lombard, Geo. R., & Co.....	15	Poulter & Co.....	23	Triumph Electric Co.....	39	
	Capital Stained Glass Works.....	26	Long & Allstatter Co.....	15	Price & Co.....	25	Tudor Boiler Mfg. Co.....	15	
	Cardwell Machine Co.....	35	Lookout Steam Boiler Works.....	15	Price & Evans Mfg. Co.....	10	Turman, Solon B.....	22	
	Carnell, George.....	24	Louisville Steam Pump Co.....	32	Record Printing House.....	17	Tyler, Owen.....	27	
	Carolina Buff & Brown Stone Co.....	6	Lowell Machine Shop.....	34	Reliance Gauge Co.....	17	V	Vail & Young.....	26
	Caroline Iron Works.....	17	Ludlow, J. L.....	6	Remington Machine Co.....	30	Valk & Murdoch Iron Works.....	4	
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	Castner & Curran.....	8	Lukens Iron & Steel Co.....	16	Rhea, R. C.....	36	Vanduzen, E. W., Co.....	32	
	Catlett, Charles.....	6	Lunkenheimer Co.....	40	Rhoads, J. E., & Sons.....	11	Van Sant, W. C.....	24	
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	Chapman Valve Mfg. Co.....	31	Main Belting Co.....	11	Ridgemont Cement & Mig. Co.....	6			
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